


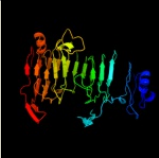

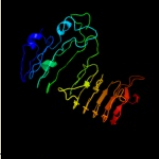


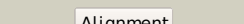
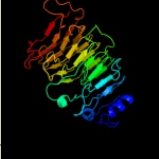
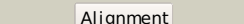

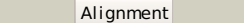

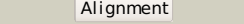

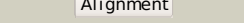
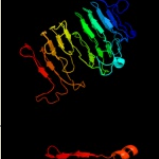
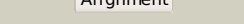
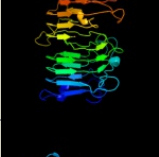
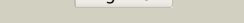



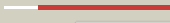





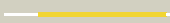










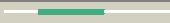
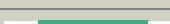
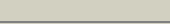
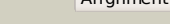

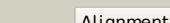



Phyre2

Email	l.a.kelley@imperial.ac.uk
Description	P71244
Date	Thu Jan 5 12:12:40 GMT 2012
Unique Job ID	b78bc694cdd6e33b

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c3jurA_	 Alignment		98.5	14	PDB header: hydrolase Chain: A: PDB Molecule: exo-poly-alpha-d-galacturonosidase; PDBTitle: the crystal structure of a hyperthermoactive exopolygalacturonase from <i>thermotoga maritima</i>
2	c2uveA_	 Alignment		98.1	21	PDB header: hydrolase Chain: A: PDB Molecule: exopolygalacturonase; PDBTitle: structure of yersinia enterocolitica family 282 exopolygalacturonase
3	d1bhea_	 Alignment		97.8	17	Fold: Single-stranded right-handed beta-helix Superfamily: Pectin lyase-like Family: Galacturonase
4	d1rmga_	 Alignment		97.1	16	Fold: Single-stranded right-handed beta-helix Superfamily: Pectin lyase-like Family: Galacturonase
5	c3gqnA_	 Alignment		96.5	19	PDB header: viral protein Chain: A: PDB Molecule: preneck appendage protein; PDBTitle: crystal structure of the pre-mature bacteriophage phi29 gene product2 12
6	d1k5ca_	 Alignment		96.3	17	Fold: Single-stranded right-handed beta-helix Superfamily: Pectin lyase-like Family: Galacturonase
7	c3eqnB_	 Alignment		95.9	22	PDB header: hydrolase Chain: B: PDB Molecule: glucan 1,3-beta-glucosidase; PDBTitle: crystal structure of beta-1,3-glucanase from phanerochaete2 chrysosporium (lam55a)
8	c2iq7D_	 Alignment		95.8	18	PDB header: hydrolase Chain: D: PDB Molecule: endopolygalacturonase; PDBTitle: crystal structure of the polygalacturonase from colletotrichum lupini2 and its implications for the interaction with polygalacturonase-3 inhibiting proteins
9	c1czfB_	 Alignment		95.6	21	PDB header: hydrolase Chain: B: PDB Molecule: polygalacturonase ii; PDBTitle: endo-polygalacturonase ii from aspergillus niger
10	d1czfa_	 Alignment		95.6	21	Fold: Single-stranded right-handed beta-helix Superfamily: Pectin lyase-like Family: Galacturonase
11	c3gq8A_	 Alignment		95.6	24	PDB header: viral protein Chain: A: PDB Molecule: preneck appendage protein; PDBTitle: crystal structure of the bacteriophage phi29 gene product2 12 n-terminal fragment in complex with 2-(n-3 cyclohexylamino)ethane sulfonic acid (ches)

12	dlia5a_	 Alignment		95.5	21	Fold: Single-stranded right-handed beta-helix Superfamily: Pectin lyase-like Family: Galacturonase
13	c2z8gB_	 Alignment		91.7	21	PDB header: hydrolase Chain: B: PDB Molecule: isopullulanase; PDBTitle: aspergillus niger atcc9642 isopullulanase complexed with isopanose
14	dlnhca_	 Alignment		81.0	18	Fold: Single-stranded right-handed beta-helix Superfamily: Pectin lyase-like Family: Galacturonase
15	dlhg8a_	 Alignment		79.0	21	Fold: Single-stranded right-handed beta-helix Superfamily: Pectin lyase-like Family: Galacturonase
16	dlogmx2	 Alignment		71.6	19	Fold: Single-stranded right-handed beta-helix Superfamily: Pectin lyase-like Family: Dextranase, catalytic domain
17	dlhf2a1	 Alignment		55.1	41	Fold: Single-stranded right-handed beta-helix Superfamily: Cell-division inhibitor MinC, C-terminal domain Family: Cell-division inhibitor MinC, C-terminal domain
18	clhf2A_	 Alignment		53.4	41	PDB header: cell division protein Chain: A: PDB Molecule: septum site-determining protein minc; PDBTitle: crystal structure of the bacterial cell-division inhibitor2 minc from t. maritima
19	c1dbgA_	 Alignment		52.2	14	PDB header: lyase Chain: A: PDB Molecule: chondroitinase b; PDBTitle: crystal structure of chondroitinase b
20	dlo88a_	 Alignment		51.5	17	Fold: Single-stranded right-handed beta-helix Superfamily: Pectin lyase-like Family: Pectate lyase-like
21	d1pcla_	 Alignment	not modelled	46.7	12	Fold: Single-stranded right-handed beta-helix Superfamily: Pectin lyase-like Family: Pectate lyase-like
22	d1xqma_	 Alignment	not modelled	46.5	30	Fold: GFP-like Superfamily: GFP-like Family: Fluorescent proteins
23	c1ogoX_	 Alignment	not modelled	44.9	20	PDB header: hydrolase Chain: X: PDB Molecule: dextranase; PDBTitle: dex49a from penicillium minioluteum complex with isomaltose
24	c3mezA_	 Alignment	not modelled	44.5	20	PDB header: sugar binding protein Chain: A: PDB Molecule: mannose-specific lectin 3 chain 1; PDBTitle: x-ray structural analysis of a mannose specific lectin from dutch2 crocus (crocus vernus)
25	c2xvsA_	 Alignment	not modelled	43.6	19	PDB header: antitumor protein Chain: A: PDB Molecule: tetratricopeptide repeat protein 5; PDBTitle: crystal structure of human ttc5 (strap) c-terminal ob2 domain
26	d2f2ha1	 Alignment	not modelled	38.8	28	Fold: Putative glucosidase YicI, C-terminal domain Superfamily: Putative glucosidase YicI, C-terminal domain Family: Putative glucosidase YicI, C-terminal domain
27	d1bn8a_	 Alignment	not modelled	38.6	22	Fold: Single-stranded right-handed beta-helix Superfamily: Pectin lyase-like Family: Pectate lyase-like
28	c2pyhB_	 Alignment	not modelled	37.8	19	PDB header: isomerase Chain: B: PDB Molecule: poly(beta-d-mannuronate) c5 epimerase 4; PDBTitle: azotobacter vinelandii mannuronan c-5 epimerase alge4 a-module2 complexed with mannuronan trisaccharide

29	dlj3pa_	Alignment	not modelled	33.3	22	Fold: Double-stranded beta-helix Superfamily: RmlC-like cupins Family: Glucose-6-phosphate isomerase, GPI
30	c1nkgA_	Alignment	not modelled	30.2	30	PDB header: lyase Chain: A: PDB Molecule: rhamnogalacturonase b; PDBTitle: rhamnogalacturonan lyase from aspergillus aculeatus
31	dlidka_	Alignment	not modelled	29.8	21	Fold: Single-stranded right-handed beta-helix Superfamily: Pectin lyase-like Family: Pectin lyase
32	c2dd9C_	Alignment	not modelled	29.2	20	PDB header: luminescent protein Chain: C: PDB Molecule: green fluorescent protein; PDBTitle: a mutant of gfp-like protein from chiridius poppei
33	d2qgra1	Alignment	not modelled	28.6	37	Fold: SH3-like barrel Superfamily: Tudor/PWWP/MBT Family: Tudor domain
34	c1vblA_	Alignment	not modelled	26.2	19	PDB header: lyase Chain: A: PDB Molecule: pectate lyase 47; PDBTitle: structure of the thermostable pectate lyase pl 47
35	c2qy1B_	Alignment	not modelled	26.1	14	PDB header: lyase Chain: B: PDB Molecule: pectate lyase ii; PDBTitle: pectate lyase a31g/r236f from xanthomonas campestris
36	c2dpfB_	Alignment	not modelled	25.6	25	PDB header: plant protein Chain: B: PDB Molecule: curculin; PDBTitle: crystal structure of curculin1 homodimer
37	c3rrrB_	Alignment	not modelled	25.3	32	PDB header: viral protein Chain: B: PDB Molecule: fusion glycoprotein f0; PDBTitle: structure of the rsv f protein in the post-fusion conformation
38	d1bwud_	Alignment	not modelled	25.0	13	Fold: beta-Prism II Superfamily: alpha-D-mannose-specific plant lectins Family: alpha-D-mannose-specific plant lectins
39	c3jyvT_	Alignment	not modelled	24.8	23	PDB header: ribosome Chain: T: PDB Molecule: s19e protein; PDBTitle: structure of the 40s rna and proteins and p/e trna for eukaryotic2 ribosome based on cryo-em map of thermomyces lanuginosus ribosome at3 8.9a resolution
40	d1x82a_	Alignment	not modelled	24.7	23	Fold: Double-stranded beta-helix Superfamily: RmlC-like cupins Family: Glucose-6-phosphate isomerase, GPI
41	c3r0eC_	Alignment	not modelled	23.3	33	PDB header: sugar binding protein Chain: C: PDB Molecule: lectin; PDBTitle: structure of remusatia vivipara lectin
42	d1s0ua2	Alignment	not modelled	21.3	78	Fold: Elongation factor/aminomethyltransferase common domain Superfamily: EF-Tu/eEF-1alpha/elF2-gamma C-terminal domain Family: EF-Tu/eEF-1alpha/elF2-gamma C-terminal domain
43	c3rkiB_	Alignment	not modelled	21.0	32	PDB header: viral protein Chain: B: PDB Molecule: fusion glycoprotein f0; PDBTitle: structural basis for immunization with post-fusion rsv f to elicit2 high neutralizing antibody titers
44	c3u5ga_	Alignment	not modelled	19.6	33	PDB header: ribosome Chain: A: PDB Molecule: 40s ribosomal protein s0-a; PDBTitle: the structure of the eukaryotic ribosome at 3.0 a resolution
45	c3cfhB_	Alignment	not modelled	19.5	31	PDB header: fluorescent protein Chain: B: PDB Molecule: gfp-like photoswitchable fluorescent protein; PDBTitle: photoswitchable red fluorescent protein psrfp, off-state
46	d1jpca_	Alignment	not modelled	19.5	23	Fold: beta-Prism II Superfamily: alpha-D-mannose-specific plant lectins Family: alpha-D-mannose-specific plant lectins
47	d1npla_	Alignment	not modelled	19.0	28	Fold: beta-Prism II Superfamily: alpha-D-mannose-specific plant lectins Family: alpha-D-mannose-specific plant lectins
48	d1pxza_	Alignment	not modelled	18.7	12	Fold: Single-stranded right-handed beta-helix Superfamily: Pectin lyase-like Family: Pectate lyase-like
49	c2xzn5_	Alignment	not modelled	17.9	28	PDB header: ribosome Chain: 5: PDB Molecule: ribosomal protein s26e containing protein; PDBTitle: crystal structure of the eukaryotic 40s ribosomal2 subunit in complex with initiation factor 1. this file3 contains the 40s subunit and initiation factor for4 molecule 2
50	c3lasA_	Alignment	not modelled	17.2	31	PDB header: lyase Chain: A: PDB Molecule: putative carbonic anhydrase; PDBTitle: crystal structure of carbonic anhydrase from streptococcus mutans to2 1.4 angstrom resolution
51	c3nezB_	Alignment	not modelled	16.8	23	PDB header: fluorescent protein Chain: B: PDB Molecule: mrojoa; PDBTitle: mrojoa
52	c3kv4A_	Alignment	not modelled	16.6	42	PDB header: h3k4me3 binding protein, transferase Chain: A: PDB Molecule: phd finger protein 8; PDBTitle: structure of phf8 in complex with histone h3
53	c1z8rA_	Alignment	not modelled	15.8	50	PDB header: hydrolase Chain: A: PDB Molecule: coxsaackievirus b4 polyprotein; PDBTitle: 2a cysteine proteinase from human coxsackievirus b4 (strain2 jvb / benschoten / new york / 51)
54	d1xd5a_	Alignment	not modelled	15.7	25	Fold: beta-Prism II Superfamily: alpha-D-mannose-specific plant lectins Family: alpha-D-mannose-specific plant lectins
55	c3iz6S_	Alignment	not modelled	15.6	16	PDB header: ribosome Chain: S: PDB Molecule: 40s ribosomal protein s19 (s19e);

55	c3z05_	Alignment	not modelled	13.8	10	PDBTitle: localization of the small subunit ribosomal proteins into a 5.5 a2 cryo-em map of triticum aestivum translating 80s ribosome PDB header: sugar binding protein
56	c3mezB_	Alignment	not modelled	15.1	10	Chain: B: PDB Molecule: mannose-specific lectin 3 chain 2; PDBTitle: x-ray structural analysis of a mannose specific lectin from dutch2 crocus (crocus vernus)
57	d1o12a1	Alignment	not modelled	15.1	17	Fold: Composite domain of metallo-dependent hydrolases Superfamily: Composite domain of metallo-dependent hydrolases Family: N-acetylglucosamine-6-phosphate deacetylase, NagA
58	d2hv2a1	Alignment	not modelled	14.6	19	Fold: SCP-like Superfamily: SCP-like Family: EF1021 C-terminal domain-like
59	d2hrva_	Alignment	not modelled	14.4	33	Fold: Trypsin-like serine proteases Superfamily: Trypsin-like serine proteases Family: Viral cysteine protease of trypsin fold
60	c2nlwA_	Alignment	not modelled	14.4	16	PDB header: translation Chain: A: PDB Molecule: eukaryotic translation initiation factor 3 PDBTitle: solution structure of the rrm domain of human eukaryotic2 initiation factor 3b
61	d2c5lc1	Alignment	not modelled	13.9	43	Fold: beta-Grasp (ubiquitin-like) Superfamily: Ubiquitin-like Family: Ras-binding domain, RBD
62	c2wulB_	Alignment	not modelled	13.9	27	PDB header: oxidoreductase Chain: B: PDB Molecule: glutaredoxin related protein 5; PDBTitle: crystal structure of the human glutaredoxin 5 with bound2 glutathione in an fes cluster
63	c3a0cA_	Alignment	not modelled	13.8	19	PDB header: sugar binding protein Chain: A: PDB Molecule: mannose/sialic acid-binding lectin; PDBTitle: crystal structure of an anti-hiv mannose-binding lectin from2 polygonatum cyrtonema hua
64	c3grhA_	Alignment	not modelled	13.6	17	PDB header: hydrolase Chain: A: PDB Molecule: acyl-coa thioester hydrolase ybgc; PDBTitle: crystal structure of escherichia coli ybhc
65	d2v7fa1	Alignment	not modelled	13.2	14	Fold: DNA/RNA-binding 3-helical bundle Superfamily: "Winged helix" DNA-binding domain Family: Rps19E-like
66	c3b08H_	Alignment	not modelled	13.1	43	PDB header: signaling protein/metal binding protein Chain: H: PDB Molecule: ranbp-type and c3hc4-type zinc finger-containing protein 1; PDBTitle: crystal structure of the mouse hoil1-l-nzf in complex with linear di-2 ubiquitin
67	c3ipzA_	Alignment	not modelled	12.9	40	PDB header: electron transport, oxidoreductase Chain: A: PDB Molecule: monothiol glutaredoxin-s14, chloroplastic; PDBTitle: crystal structure of arabidopsis monothiol glutaredoxin atgrxcp
68	c2e7pC_	Alignment	not modelled	12.7	47	PDB header: electron transport Chain: C: PDB Molecule: glutaredoxin; PDBTitle: crystal structure of the holo form of glutaredoxin c1 from populus2 tremula x tremuloides
69	d1jnya2	Alignment	not modelled	12.6	19	Fold: Elongation factor/aminomethyltransferase common domain Superfamily: EF-Tu/eEF-1alpha/elF2-gamma C-terminal domain Family: EF-Tu/eEF-1alpha/elF2-gamma C-terminal domain
70	c3hz7A_	Alignment	not modelled	12.5	50	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of the sira-like protein (dsy4693) from2 desulfotobacterium hafniense, northeast structural genomics3 consortium target dhr2a
71	c2z6zA_	Alignment	not modelled	12.4	26	PDB header: fluorescent protein Chain: A: PDB Molecule: fluorescent protein dronpa; PDBTitle: crystal structure of a photoswitchable gfp-like protein2 dronpa in the bright-state
72	c3l4nA_	Alignment	not modelled	12.4	27	PDB header: oxidoreductase Chain: A: PDB Molecule: monothiol glutaredoxin-6; PDBTitle: crystal structure of yeast monothiol glutaredoxin grx6
73	c2jacA_	Alignment	not modelled	11.7	47	PDB header: electron transport Chain: A: PDB Molecule: glutaredoxin-1; PDBTitle: glutaredoxin grx1p c30s mutant from yeast
74	c3c1sA_	Alignment	not modelled	10.9	50	PDB header: oxidoreductase Chain: A: PDB Molecule: glutaredoxin-1; PDBTitle: crystal structure of grx1 in glutathionylated form
75	d1moua_	Alignment	not modelled	10.9	23	Fold: GFP-like Superfamily: GFP-like Family: Fluorescent proteins
76	d1jhba_	Alignment	not modelled	10.7	27	Fold: Thioredoxin fold Superfamily: Thioredoxin-like Family: Thioltransferase
77	d1kj1d_	Alignment	not modelled	10.6	14	Fold: beta-Prism II Superfamily: alpha-D-mannose-specific plant lectins Family: alpha-D-mannose-specific plant lectins
78	c3r0eD_	Alignment	not modelled	10.6	20	PDB header: sugar binding protein Chain: D: PDB Molecule: lectin; PDBTitle: structure of remusatia vivipara lectin
79	d1nkgA3	Alignment	not modelled	10.1	20	Fold: Supersandwich Superfamily: Galactose mutarotase-like Family: Rhamnogalacturonase B, RhgB, N-terminal domain
80	c3pu3A_	Alignment	not modelled	9.9	45	PDB header: protein binding Chain: A: PDB Molecule: phd finger protein 2; PDBTitle: phf2 jumoni domain-nog complex
81	c3k3nA_	Alignment	not modelled	9.8	50	PDB header: oxidoreductase Chain: A: PDB Molecule: phd finger protein 8; PDBTitle: crystal structure of the catalytic core domain of human

						phf8
82	d1ggxa_	Alignment	not modelled	9.8	27	Fold: GFP-like Superfamily: GFP-like Family: Fluorescent proteins
83	c2gw4D_	Alignment	not modelled	9.8	23	PDB header: luminescent protein Chain: D: PDB Molecule: kaede; PDBTitle: crystal structure of stony coral fluorescent protein kaede, red form
84	c2w3nA_	Alignment	not modelled	9.7	31	PDB header: lyase Chain: A: PDB Molecule: carbonic anhydrase 2; PDBTitle: structure and inhibition of the co2-sensing carbonic2 anhydrase can2 from the pathogenic fungus cryptococcus3 neoformans
85	d1ktea_	Alignment	not modelled	9.7	27	Fold: Thioredoxin fold Superfamily: Thioredoxin-like Family: Thioltransferase
86	d2rkyal	Alignment	not modelled	9.7	57	Fold: Fnl-like domain Superfamily: Fnl-like domain Family: Fibronectin type I module
87	d1bwua_	Alignment	not modelled	9.6	17	Fold: beta-Prism II Superfamily: alpha-D-mannose-specific plant lectins Family: alpha-D-mannose-specific plant lectins
88	d1jdqa_	Alignment	not modelled	9.4	50	Fold: IF3-like Superfamily: SirA-like Family: SirA-like
89	c3gztF_	Alignment	not modelled	9.3	86	PDB header: virus Chain: F: PDB Molecule: outer capsid glycoprotein vp7; PDBTitle: vp7 recoated rotavirus dlp
90	d2naca2	Alignment	not modelled	9.3	20	Fold: Flavodoxin-like Superfamily: Formate/glycerate dehydrogenase catalytic domain-like Family: Formate/glycerate dehydrogenases, substrate-binding domain
91	d1lbqa_	Alignment	not modelled	9.3	29	Fold: Chelatase-like Superfamily: Chelatase Family: Ferrochelatase
92	d1xd6a_	Alignment	not modelled	9.2	30	Fold: beta-Prism II Superfamily: alpha-D-mannose-specific plant lectins Family: alpha-D-mannose-specific plant lectins
93	c1ylkA_	Alignment	not modelled	9.2	25	PDB header: unknown function Chain: A: PDB Molecule: hypothetical protein rv1284/mt1322; PDBTitle: crystal structure of rv1284 from mycobacterium tuberculosis in complex2 with thiocyanate
94	d2cg7a1	Alignment	not modelled	9.1	57	Fold: Fnl-like domain Superfamily: Fnl-like domain Family: Fibronectin type I module
95	c2zo7A_	Alignment	not modelled	9.0	24	PDB header: luminescent protein Chain: A: PDB Molecule: cyan/green-emitting gfp-like protein, kusabira-cyan mutant PDBTitle: crystal structure of a kusabira-cyan mutant (kcy-r1), a cyan/green-2 emitting gfp-like protein
96	c2hzfA_	Alignment	not modelled	8.9	27	PDB header: electron transport, oxidoreductase Chain: A: PDB Molecule: glutaredoxin-1; PDBTitle: crystal structures of a poxviral glutaredoxin in the oxidized and2 reduced states show redox-correlated structural changes
97	d2rkyal	Alignment	not modelled	8.9	71	Fold: Fnl-like domain Superfamily: Fnl-like domain Family: Fibronectin type I module
98	c2eceA_	Alignment	not modelled	8.7	25	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: 462aa long hypothetical selenium-binding protein; PDBTitle: x-ray structure of hypothetical selenium-binding protein2 from sulfolobus tokodaii, st0059
99	c2ddcA_	Alignment	not modelled	8.6	34	PDB header: luminescent protein Chain: A: PDB Molecule: photoconvertible fluorescent protein; PDBTitle: unique behavior of a histidine responsible for an2 engineered green-to-red photoconversion process