








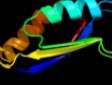

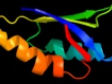










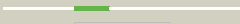
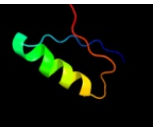


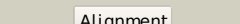

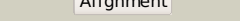
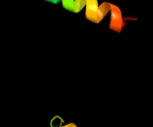

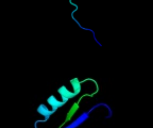







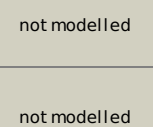




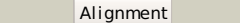





Phyre2

Email	I.a.kelley@imperial.ac.uk
Description	P0AC30
Date	Thu Jan 5 11:17:02 GMT 2012
Unique Job ID	c34d188e17ed2f3a

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c3k07A_	 Alignment		94.9	13	PDB header: transport protein Chain: A: PDB Molecule: cation efflux system protein cusa; PDBTitle: crystal structure of cusa
2	c1oy8A_	 Alignment		90.1	17	PDB header: membrane protein Chain: A: PDB Molecule: acriflavine resistance protein b; PDBTitle: structural basis of multiple drug binding capacity of the acrb2 multidrug efflux pump
3	d2cyya2	 Alignment		78.2	23	Fold: Ferredoxin-like Superfamily: Dimeric alpha+beta barrel Family: Lrp/AsnC-like transcriptional regulator C-terminal domain
4	d2cg4a2	 Alignment		77.9	19	Fold: Ferredoxin-like Superfamily: Dimeric alpha+beta barrel Family: Lrp/AsnC-like transcriptional regulator C-terminal domain
5	c2e1aD_	 Alignment		73.5	19	PDB header: transcription Chain: D: PDB Molecule: 75aa long hypothetical regulatory protein asnc; PDBTitle: crystal structure of ffrp-dm1
6	c2zbcH_	 Alignment		64.2	19	PDB header: transcription Chain: H: PDB Molecule: 83aa long hypothetical transcriptional regulator asnc; PDBTitle: crystal structure of sts042, a stand-alone ram module protein, from2 hyperthermophilic archaeon sulfolobus tokodaii strain7.
7	c3iouB_	 Alignment		59.5	11	PDB header: signaling protein Chain: B: PDB Molecule: maltose-binding protein, huntingtin fusion PDBTitle: huntingtin amino-terminal region with 17 gln residues -2 crystal c94
8	c2e1cA_	 Alignment		55.4	18	PDB header: transcription/dna Chain: A: PDB Molecule: putative hth-type transcriptional regulator ph1519; PDBTitle: structure of putative hth-type transcriptional regulator ph1519/dna2 complex
9	c1tkeA_	 Alignment		53.1	14	PDB header: ligase Chain: A: PDB Molecule: threonyl-trna synthetase; PDBTitle: crystal structure of the editing domain of threonyl-trna2 synthetase complexed with serine
10	c3py7A_	 Alignment		52.1	13	PDB header: viral protein Chain: A: PDB Molecule: maltose-binding periplasmic protein,paxillin ld1,protein e6 PDBTitle: crystal structure of full-length bovine papillomavirus oncoprotein e62 in complex with ld1 motif of paxillin at 2.3a resolution
11	d2cfxa2	 Alignment		52.0	9	Fold: Ferredoxin-like Superfamily: Dimeric alpha+beta barrel Family: Lrp/AsnC-like transcriptional regulator C-terminal domain

12	c2djwF	 <div>Alignment</div>		51.1	12	PDB header: unknown function Chain: F: PDB Molecule: probable transcriptional regulator, asnc family; PDBTitle: crystal structure of ttha0845 from thermus thermophilus hb8
13	c3ibwA	 <div>Alignment</div>		47.7	21	PDB header: transferase Chain: A: PDB Molecule: gtp pyrophosphokinase; PDBTitle: crystal structure of the act domain from gtp2 pyrophosphokinase of chlorobium tepidum. northeast3 structural genomics consortium target ctr148a
14	c1ciiA	 <div>Alignment</div>		46.6	10	PDB header: transmembrane protein Chain: A: PDB Molecule: colicin ia; PDBTitle: colicin ia
15	c2voyG	 <div>Alignment</div>		41.5	24	PDB header: hydrolase Chain: G: PDB Molecule: sarcoplasmic/endoplasmic reticulum calcium PDBTitle: cryoem model of copa, the copper transporting atpase from2 archaeoglobus fulgidus
16	d1z1za1	 <div>Alignment</div>		41.5	14	Fold: Phage tail protein-like Superfamily: Phage tail protein-like Family: Lambda phage gpU-like
17	c3dm0A	 <div>Alignment</div>		40.9	11	PDB header: sugar binding protein,signaling protein Chain: A: PDB Molecule: maltose-binding periplasmic protein fused with PDBTitle: maltose binding protein fusion with rack1 from a. thaliana
18	d1i1ga2	 <div>Alignment</div>		40.2	12	Fold: Ferredoxin-like Superfamily: Dimeric alpha+beta barrel Family: Lrp/AsnC-like transcriptional regulator C-terminal domain
19	c3c4mA	 <div>Alignment</div>		36.8	13	PDB header: membrane protein Chain: A: PDB Molecule: fusion protein of maltose-binding periplasmic protein and PDBTitle: structure of human parathyroid hormone in complex with the2 extracellular domain of its g-protein-coupled receptor (pth1r)
20	c3ob4A	 <div>Alignment</div>		32.8	13	PDB header: allergen Chain: A: PDB Molecule: maltose abc transporter periplasmic protein, arah 2; PDBTitle: mbp-fusion protein of the major peanut allergen ara h 2
21	c1hsjA	 <div>Alignment</div>	not modelled	32.3	13	PDB header: transcription/sugar binding protein Chain: A: PDB Molecule: fusion protein consisting of staphylococcus PDBTitle: sarr mbp fusion structure
22	c2nvuB	 <div>Alignment</div>	not modelled	30.8	11	PDB header: protein turnover, ligase Chain: B: PDB Molecule: maltose binding protein/nedd8-activating enzyme PDBTitle: structure of appbp1-uba3~nedd8-nedd8-mgatp-ubc12(c111a), a2 trapped ubiquitin-like protein activation complex
23	c2kjaA	 <div>Alignment</div>	not modelled	30.8	19	PDB header: ribosomal protein Chain: A: PDB Molecule: 30s ribosomal protein s6; PDBTitle: solution structure and backbone dynamics of the permutant2 p54-55
24	c3f5fA	 <div>Alignment</div>	not modelled	30.4	13	PDB header: transport, transferase Chain: A: PDB Molecule: maltose-binding periplasmic protein, heparan PDBTitle: crystal structure of heparan sulfate 2-o-sulfotransferase2 from gallus gallus as a maltose binding protein fusion.
25	d1vq3a	 <div>Alignment</div>	not modelled	29.8	23	Fold: PurS-like Superfamily: PurS-like Family: PurS subunit of FGAM synthetase
26	d1nnfa	 <div>Alignment</div>	not modelled	29.3	26	Fold: Periplasmic binding protein-like II Superfamily: Periplasmic binding protein-like II Family: Phosphate binding protein-like
27	c3osrA	 <div>Alignment</div>	not modelled	29.3	13	PDB header: fluorescent protein, transport protein Chain: A: PDB Molecule: maltose-binding periplasmic protein, green fluorescent PDBTitle: maltose-bound maltose sensor engineered by insertion of circularly2 permuted green fluorescent protein into e. coli maltose binding3 protein at position 311
		 <div></div>				Fold: PurS-like

28	d1gtda_	Alignment	not modelled	29.0	22	Superfamily: PurS-like Family: PurS subunit of FGAM synthetase
29	c3bn7A_	Alignment	not modelled	27.1	19	PDB header: unknown function Chain: A: PDB Molecule: ferredoxin-like protein; PDBTitle: crystal structure of a dimeric ferredoxin-like protein (cc_2267) from2 caulobacter crescentus cb15 at 1.64 a resolution
30	d1xc1a_	Alignment	not modelled	27.0	23	Fold: Periplasmic binding protein-like II Superfamily: Periplasmic binding protein-like II Family: Phosphate binding protein-like
31	d1iwga3	Alignment	not modelled	26.6	19	Fold: Ferredoxin-like Superfamily: Multidrug efflux transporter AcrB pore domain; PN1, PN2, PC1 and PC2 subdomains Family: Multidrug efflux transporter AcrB pore domain; PN1, PN2, PC1 and PC2 subdomains
32	d1t4aa_	Alignment	not modelled	25.7	21	Fold: PurS-like Superfamily: PurS-like Family: PurS subunit of FGAM synthetase
33	d1laxa_	Alignment	not modelled	25.5	13	Fold: Periplasmic binding protein-like II Superfamily: Periplasmic binding protein-like II Family: Phosphate binding protein-like
34	d1q35a_	Alignment	not modelled	25.4	13	Fold: Periplasmic binding protein-like II Superfamily: Periplasmic binding protein-like II Family: Phosphate binding protein-like
35	d1ygva3	Alignment	not modelled	25.4	23	Fold: Ferredoxin-like Superfamily: ACT-like Family: Phosphoglycerate dehydrogenase, regulatory (C-terminal) domain
36	d1v4pa_	Alignment	not modelled	24.5	18	Fold: RRF/tRNA synthetase additional domain-like Superfamily: ThrRS/AlaRS common domain Family: AlaX-like
37	c1svxB_	Alignment	not modelled	23.3	12	PDB header: de novo protein/sugar binding protein Chain: B: PDB Molecule: maltose-binding periplasmic protein; PDBTitle: crystal structure of a designed selected ankyrin repeat2 protein in complex with the maltose binding protein
38	c3bb5B_	Alignment	not modelled	22.7	11	PDB header: unknown function Chain: B: PDB Molecule: stress responsive alpha-beta protein; PDBTitle: crystal structure of a dimeric ferredoxin-like protein of unknown2 function (jann_3925) from jannaschia sp. ccs1 at 2.30 a resolution
39	d1xvxa_	Alignment	not modelled	22.7	15	Fold: Periplasmic binding protein-like II Superfamily: Periplasmic binding protein-like II Family: Phosphate binding protein-like
40	c3oaiB_	Alignment	not modelled	22.1	13	PDB header: membrane protein, cell adhesion Chain: B: PDB Molecule: maltose-binding periplasmic protein, myelin protein p0; PDBTitle: crystal structure of the extra-cellular domain of human myelin protein2 zero
41	c2zw2B_	Alignment	not modelled	22.0	14	PDB header: ligase Chain: B: PDB Molecule: putative uncharacterized protein sts178; PDBTitle: crystal structure of formylglycinamide ribonucleotide amidotransferase2 iii from sulfolobus tokodaii (stpsrs)
42	c3oq2A_	Alignment	not modelled	21.9	16	PDB header: immune system Chain: A: PDB Molecule: crispr-associated protein cas2; PDBTitle: structure of a crispr associated protein cas2 from desulfovibrio2 vulgaris
43	c1t3gB_	Alignment	not modelled	21.8	26	PDB header: membrane protein Chain: B: PDB Molecule: x-linked interleukin-1 receptor accessory PDBTitle: crystal structure of the toll/interleukin-1 receptor (tir)2 domain of human il-1rapl
44	c1r6za_	Alignment	not modelled	21.8	12	PDB header: gene regulation Chain: A: PDB Molecule: chimera of maltose-binding periplasmic protein and PDBTitle: the crystal structure of the argonaute2 paz domain (as a mbp fusion)
45	c2yx5A_	Alignment	not modelled	21.7	13	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: upf0062 protein mj1593; PDBTitle: crystal structure of methanocaldococcus jannaschii purs, one of the2 subunits of formylglycinamide ribonucleotide amidotransferase in the3 purine biosynthetic pathway
46	c3h4zC_	Alignment	not modelled	21.3	13	PDB header: allergen Chain: C: PDB Molecule: maltose-binding periplasmic protein fused with allergen PDBTitle: crystal structure of an mbp-der p 7 fusion protein
47	c3bdeA_	Alignment	not modelled	20.6	14	PDB header: unknown function Chain: A: PDB Molecule: mlI5499 protein; PDBTitle: crystal structure of a dabb family protein with a ferredoxin-like fold2 (mlI5499) from mesorhizobium loti maff303099 at 1.79 a resolution
48	c1mh3A_	Alignment	not modelled	20.4	14	PDB header: sugar binding, dna binding protein Chain: A: PDB Molecule: maltose binding-a1 homeodomain protein chimera; PDBTitle: maltose binding-a1 homeodomain protein chimera, crystal2 form i
49	d2csfa1	Alignment	not modelled	20.2	28	Fold: lambda repressor-like DNA-binding domains Superfamily: lambda repressor-like DNA-binding domains Family: CUT domain
50	c2dgbA_	Alignment	not modelled	20.0	24	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: hypothetical protein purs; PDBTitle: structure of thermus thermophilus purs in the p21 form
51	d1ryla_	Alignment	not modelled	19.9	14	Fold: Hypothetical protein yfbM Superfamily: Hypothetical protein yfbM Family: Hypothetical protein yfbM
52	d1sc6a3	Alignment	not modelled	19.9	22	Fold: Ferredoxin-like Superfamily: ACT-like Family: Phosphoglycerate dehydrogenase, regulatory (C-terminal) domain

53	c3bguA	Alignment	not modelled	19.8	13	PDB header: unknown function Chain: A: PDB Molecule: ferredoxin-like protein of unknown function; PDBTitle: crystal structure of a dimeric ferredoxin-like protein of unknown2 function (tfu_0763) from thermobifida fusca yx at 1.50 a resolution
54	d1zpxw1	Alignment	not modelled	19.7	13	Fold: Ferredoxin-like Superfamily: TTP0101/SSO1404-like Family: TTP0101/SSO1404-like
55	c3mp6A	Alignment	not modelled	19.1	12	PDB header: histone binding protein Chain: A: PDB Molecule: maltose-binding periplasmic protein, linker, saga- PDBTitle: complex structure of sgf29 and dimethylated h3k4
56	c2p6tH	Alignment	not modelled	17.8	14	PDB header: transcription Chain: H: PDB Molecule: transcriptional regulator, Irp/asnc family; PDBTitle: crystal structure of transcriptional regulator nmb0573 and l-leucine2 complex from neisseria meningitidis
57	c2qycA	Alignment	not modelled	17.7	9	PDB header: unknown function Chain: A: PDB Molecule: ferredoxin-like protein; PDBTitle: crystal structure of a dimeric ferredoxin-like protein (bb1511) from2 bordetella bronchiseptica rb50 at 1.90 a resolution
58	d2qfia1	Alignment	not modelled	17.3	20	Fold: Alpha-lytic protease prodomain-like Superfamily: Cation efflux protein cytoplasmic domain-like Family: Cation efflux protein cytoplasmic domain-like
59	c2ew9A	Alignment	not modelled	16.8	18	PDB header: hydrolase Chain: A: PDB Molecule: copper-transporting atpase 2; PDBTitle: solution structure of apowln5-6
60	c1ilgA	Alignment	not modelled	16.4	21	PDB header: transcription Chain: A: PDB Molecule: transcriptional regulator IrpA; PDBTitle: crystal structure of the Irp-like transcriptional regulator from the2 archaeon pyrococcus furiosus
61	c3o3uN	Alignment	not modelled	16.3	11	PDB header: transport protein, signaling protein Chain: N: PDB Molecule: maltose-binding periplasmic protein, advanced glycosylation PDBTitle: crystal structure of human receptor for advanced glycation endproducts2 (rage)
62	c3gr1A	Alignment	not modelled	15.8	9	PDB header: membrane protein Chain: A: PDB Molecule: protein prgh; PDBTitle: periplasmic domain of the t3ss inner membrane protein prgh2 from s.typhimurium (fragment 170-392)
63	c3k5pA	Alignment	not modelled	15.8	15	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
64	c3gr0D	Alignment	not modelled	15.7	9	PDB header: membrane protein Chain: D: PDB Molecule: protein prgh; PDBTitle: periplasmic domain of the t3ss inner membrane protein prgh from2 s.typhimurium (fragment 170-362)
65	c2yy3B	Alignment	not modelled	15.6	6	PDB header: translation Chain: B: PDB Molecule: elongation factor 1-beta; PDBTitle: crystal structure of translation elongation factor ef-1 beta from2 pyrococcus horikoshii
66	d1kn0a	Alignment	not modelled	14.3	17	Fold: dsRBD-like Superfamily: dsRNA-binding domain-like Family: The homologous-pairing domain of Rad52 recombinase
67	c2pt1A	Alignment	not modelled	14.2	15	PDB header: metal transport Chain: A: PDB Molecule: iron transport protein; PDBTitle: futa1 synechocystis pcc 6803
68	c2rf4B	Alignment	not modelled	14.1	11	PDB header: transferase Chain: B: PDB Molecule: dna-directed rna polymerase i subunit rpa4; PDBTitle: crystal structure of the rna polymerase i subcomplex a14/43
69	d1nyra3	Alignment	not modelled	14.0	11	Fold: RRF/tRNA synthetase additional domain-like Superfamily: ThrRS/AlaRS common domain Family: Threonyl-tRNA synthetase (ThrRS), second 'additional' domain
70	c2pc6C	Alignment	not modelled	14.0	16	PDB header: lyase Chain: C: PDB Molecule: probable acetolactate synthase isozyme iii (small subunit); PDBTitle: crystal structure of putative acetolactate synthase- small subunit2 from nitrosomonas europaea
71	c3ftjA	Alignment	not modelled	13.7	17	PDB header: hydrolase Chain: A: PDB Molecule: macrolide export atp-binding/permease protein PDBTitle: crystal structure of the periplasmic region of macb from2 actinobacillus actinomycetemcomitans
72	c2jo1A	Alignment	not modelled	13.7	8	PDB header: hydrolase regulator Chain: A: PDB Molecule: phospholemman; PDBTitle: structure of the na,k-atpase regulatory protein fxyd1 in2 micelles
73	c2vgqA	Alignment	not modelled	13.6	15	PDB header: immune system/transport Chain: A: PDB Molecule: maltose-binding periplasmic protein, PDBTitle: crystal structure of human ips-1 card
74	c3hzpA	Alignment	not modelled	13.3	10	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: ntf2-like protein of unknown function; PDBTitle: crystal structure of ntf2-like protein of unknown function mn2a_05052 from prochlorococcus marinus (yp_291699.1) from prochlorococcus sp.3 natl2a at 1.40 a resolution
75	c2jp3A	Alignment	not modelled	13.3	13	PDB header: transcription Chain: A: PDB Molecule: fxyd domain-containing ion transport regulator 4; PDBTitle: solution structure of the human fxyd4 (chif) protein in sds2 micelles
76	c3csgA	Alignment	not modelled	13.2	13	PDB header: de novo protein, sugar binding protein Chain: A: PDB Molecule: maltose-binding protein monobody ys1 fusion;

					PDBTitle: crystal structure of monobody ys1(mbp-74)/maltose binding2 protein fusion complex
77	d2e74d2	Alignment	not modelled	13.2	18 Fold: Single transmembrane helix Superfamily: ISP transmembrane anchor Family: ISP transmembrane anchor
78	d2rh3a1	Alignment	not modelled	13.1	21 Fold: Ribbon-helix-helix Superfamily: Ribbon-helix-helix Family: VirC2-like
79	c2f1fA_	Alignment	not modelled	13.1	19 PDB header: transferase Chain: A: PDB Molecule: acetolactate synthase isozyme iii small subunit; PDBTitle: crystal structure of the regulatory subunit of2 acetohydroxyacid synthase isozyme iii from e. coli
80	c2cfxD_	Alignment	not modelled	12.9	9 PDB header: transcription Chain: D: PDB Molecule: hth-type transcriptional regulator lrpc; PDBTitle: structure of b.subtilis lrpc
81	c1h2iG_	Alignment	not modelled	12.9	17 PDB header: dna-binding protein Chain: G: PDB Molecule: dna repair protein rad52 homolog; PDBTitle: human rad52 protein, n-terminal domain
82	d1tr0a_	Alignment	not modelled	12.3	3 Fold: Ferredoxin-like Superfamily: Dimeric alpha+beta barrel Family: Plant stress-induced protein
83	c1nyqA_	Alignment	not modelled	12.1	13 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
84	d1qupa2	Alignment	not modelled	12.1	11 Fold: Ferredoxin-like Superfamily: HMA, heavy metal-associated domain Family: HMA, heavy metal-associated domain
85	c1qupA_	Alignment	not modelled	11.9	11 PDB header: chaperone Chain: A: PDB Molecule: superoxide dismutase 1 copper chaperone; PDBTitle: crystal structure of the copper chaperone for superoxide2 dismutase
86	c1jk9D_	Alignment	not modelled	11.7	11 PDB header: oxidoreductase Chain: D: PDB Molecule: copper chaperone for superoxide dismutase; PDBTitle: heterodimer between h48f-ysod1 and yccs
87	c3d4cA_	Alignment	not modelled	11.5	13 PDB header: cell adhesion Chain: A: PDB Molecule: maltose-binding periplasmic protein, linker, zona pellucida PDBTitle: zp-n domain of mammalian sperm receptor zp3 (crystal form i)
88	c2jsxA_	Alignment	not modelled	11.3	19 PDB header: chaperone Chain: A: PDB Molecule: protein napd; PDBTitle: solution structure of the e. coli tat proofreading2 chaperone protein napd
89	d1r8ja1	Alignment	not modelled	11.2	11 Fold: KaiA/RbsU domain Superfamily: KaiA/RbsU domain Family: Circadian clock protein KaiA, C-terminal domain
90	c1om8A_	Alignment	not modelled	11.1	16 PDB header: hydrolase Chain: A: PDB Molecule: serralysin; PDBTitle: crystal structure of a cold adapted alkaline protease from pseudomonas2 tac ii 18, co-crystallized with 10 mm edta
91	d1sata2	Alignment	not modelled	11.1	12 Fold: Zincin-like Superfamily: Metalloproteases ("zincins"), catalytic domain Family: Serralysin-like metalloprotease, catalytic (N-terminal) domain
92	d1tkea2	Alignment	not modelled	10.9	18 Fold: RRF/tRNA synthetase additional domain-like Superfamily: ThrRS/AlaRS common domain Family: Threonyl-tRNA synthetase (ThrRS), second 'additional' domain
93	d1y4ta_	Alignment	not modelled	10.8	7 Fold: Periplasmic binding protein-like II Superfamily: Periplasmic binding protein-like II Family: Phosphate binding protein-like
94	d1hyua3	Alignment	not modelled	10.7	4 Fold: Thioredoxin fold Superfamily: Thioredoxin-like Family: PDI-like
95	d1g9ka2	Alignment	not modelled	10.7	16 Fold: Zincin-like Superfamily: Metalloproteases ("zincins"), catalytic domain Family: Serralysin-like metalloprotease, catalytic (N-terminal) domain
96	c2z56B_	Alignment	not modelled	10.6	11 PDB header: hydrolase Chain: B: PDB Molecule: tk-subtilisin; PDBTitle: crystal structure of g56s-propeptide:s324a-subtilisin complex
97	c3lqbA_	Alignment	not modelled	10.5	3 PDB header: hydrolase Chain: A: PDB Molecule: loc792177 protein; PDBTitle: crystal structure of the hatching enzyme zhe1 from the zebrafish danio2 rerio
98	d1v5ib1	Alignment	not modelled	10.3	17 Fold: Ferredoxin-like Superfamily: Protease propeptides/inhibitors Family: Subtilase propeptides/inhibitors
99	d1osce_	Alignment	not modelled	10.1	12 Fold: Ferredoxin-like Superfamily: GlnB-like Family: Divalent ion tolerance proteins CutA (CutA1)