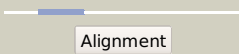

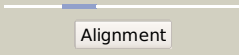

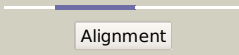

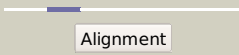
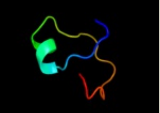
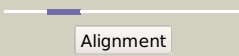
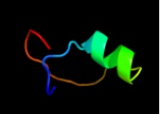
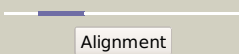

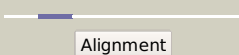

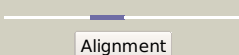





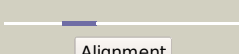




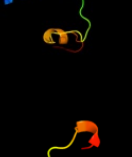




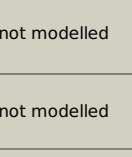


# Phyre2

Email	l.a.kelley@imperial.ac.uk
Description	Q4QQM4
Date	Tue Jul 30 13:10:26 BST 2013
Unique Job ID	24c8b9f7d2ca641e

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	<a href="#">c3zf7S_</a>	 Alignment		22.9	34	<b>PDB header:</b> ribosome <b>Chain:</b> S; <b>PDB Molecule:</b> 60s ribosomal protein l18a; <b>PDBTitle:</b> high-resolution cryo-electron microscopy structure of the trypanosoma2 brucei ribosome
2	<a href="#">c3qoqC_</a>	 Alignment		20.2	54	<b>PDB header:</b> transcription/dna <b>Chain:</b> C; <b>PDB Molecule:</b> alginate and motility regulator z; <b>PDBTitle:</b> crystal structure of the transcription factor amrz in complex with the2 18 base pair amrz1 binding site
3	<a href="#">c2hjnA_</a>	 Alignment		17.1	13	<b>PDB header:</b> cell cycle <b>Chain:</b> A; <b>PDB Molecule:</b> maintenance of ploidy protein mob1; <b>PDBTitle:</b> structural and functional analysis of saccharomyces2 cerevisiae mob1
4	<a href="#">d1ixrc1</a>	 Alignment		17.0	30	<b>Fold:</b> DNA/RNA-binding 3-helical bundle <b>Superfamily:</b> "Winged helix" DNA-binding domain <b>Family:</b> Helicase DNA-binding domain
5	<a href="#">d1in4a1</a>	 Alignment		15.4	30	<b>Fold:</b> DNA/RNA-binding 3-helical bundle <b>Superfamily:</b> "Winged helix" DNA-binding domain <b>Family:</b> Helicase DNA-binding domain
6	<a href="#">c3j39S_</a>	 Alignment		15.2	26	<b>PDB header:</b> ribosome <b>Chain:</b> S; <b>PDB Molecule:</b> 60s ribosomal protein l18a; <b>PDBTitle:</b> structure of the d. melanogaster 60s ribosomal proteins
7	<a href="#">c2v6xB_</a>	 Alignment		14.3	55	<b>PDB header:</b> protein transport <b>Chain:</b> B; <b>PDB Molecule:</b> doa4-independent degradation protein 4; <b>PDBTitle:</b> structural insight into the interaction between escrt-iii2 and vps4
8	<a href="#">c3nr5A_</a>	 Alignment		14.2	41	<b>PDB header:</b> transcription <b>Chain:</b> A; <b>PDB Molecule:</b> repressor of rna polymerase iii transcription maf1 homolog; <b>PDBTitle:</b> crystal structure of human maf1
9	<a href="#">d1rk8b_</a>	 Alignment		13.8	40	<b>Fold:</b> Mago nashi protein <b>Superfamily:</b> Mago nashi protein <b>Family:</b> Mago nashi protein
10	<a href="#">c1t0fC_</a>	 Alignment		13.7	24	<b>PDB header:</b> dna binding protein <b>Chain:</b> C; <b>PDB Molecule:</b> transposon tn7 transposition protein tnsC; <b>PDBTitle:</b> crystal structure of the tnsA/tnsC(504-555) complex
11	<a href="#">d1mnta_</a>	 Alignment		13.1	31	<b>Fold:</b> Ribbon-helix-helix <b>Superfamily:</b> Ribbon-helix-helix <b>Family:</b> Arc/Mnt-like phage repressors

12	<a href="#">c3pcqX</a>	Alignment		12.7	15	<b>PDB header:</b> photosynthesis <b>Chain:</b> X: <b>PDB Molecule:</b> photosystem i 4.8k protein; <b>PDBTitle:</b> femtosecond x-ray protein nanocrystallography
13	<a href="#">c1yewF</a>	Alignment		12.6	15	<b>PDB header:</b> oxidoreductase, membrane protein <b>Chain:</b> F: <b>PDB Molecule:</b> particulate methane monooxygenase, a subunit; <b>PDBTitle:</b> crystal structure of particulate methane monooxygenase
14	<a href="#">c3di3A</a>	Alignment		12.4	26	<b>PDB header:</b> cytokine/cytokine receptor <b>Chain:</b> A: <b>PDB Molecule:</b> interleukin-7; <b>PDBTitle:</b> crystal structure of the complex of human interleukin-7 with2 glycosylated human interleukin-7 receptor alpha ectodomain
15	<a href="#">c3j3bS</a>	Alignment		12.4	29	<b>PDB header:</b> ribosome <b>Chain:</b> S: <b>PDB Molecule:</b> 60s ribosomal protein l18a; <b>PDBTitle:</b> structure of the human 60s ribosomal proteins
16	<a href="#">c1u9pA</a>	Alignment		12.2	27	<b>PDB header:</b> unknown function <b>Chain:</b> A: <b>PDB Molecule:</b> parc; <b>PDBTitle:</b> permuted single-chain arc
17	<a href="#">c3izcS</a>	Alignment		12.1	26	<b>PDB header:</b> ribosome <b>Chain:</b> S: <b>PDB Molecule:</b> 60s ribosomal protein rpl20 (l18ae); <b>PDBTitle:</b> localization of the large subunit ribosomal proteins into a 6.1 a2 cryo-em map of saccharomyces cerevisiae translating 80s ribosome
18	<a href="#">c3twfA</a>	Alignment		11.7	60	<b>PDB header:</b> unknown function <b>Chain:</b> A: <b>PDB Molecule:</b> alpha4f3a; <b>PDBTitle:</b> crystal structure of the de novo designed fluorinated peptide2 alpha4f3a
19	<a href="#">c3twfB</a>	Alignment		11.7	60	<b>PDB header:</b> unknown function <b>Chain:</b> B: <b>PDB Molecule:</b> alpha4f3a; <b>PDBTitle:</b> crystal structure of the de novo designed fluorinated peptide2 alpha4f3a
20	<a href="#">d1ixsb1</a>	Alignment		11.3	30	<b>Fold:</b> DNA/RNA-binding 3-helical bundle <b>Superfamily:</b> "Winged helix" DNA-binding domain <b>Family:</b> Helicase DNA-binding domain
21	<a href="#">c3chxF</a>	Alignment	not modelled	10.8	15	<b>PDB header:</b> membrane protein <b>Chain:</b> F: <b>PDB Molecule:</b> pmoa; <b>PDBTitle:</b> crystal structure of methyloinus trichosporium ob3b2 particulate methane monooxygenase (pmmo)
22	<a href="#">c3tweA</a>	Alignment	not modelled	9.9	67	<b>PDB header:</b> unknown function <b>Chain:</b> A: <b>PDB Molecule:</b> alpha4h; <b>PDBTitle:</b> crystal structure of the de novo designed peptide alpha4h
23	<a href="#">c1ho7A</a>	Alignment	not modelled	9.8	47	<b>PDB header:</b> membrane protein <b>Chain:</b> A: <b>PDB Molecule:</b> voltage-gated potassium channel protein; <b>PDBTitle:</b> nmr structure of the potassium channel fragment l45 in tfe
24	<a href="#">c1ho2A</a>	Alignment	not modelled	9.8	47	<b>PDB header:</b> membrane protein <b>Chain:</b> A: <b>PDB Molecule:</b> voltage-gated potassium channel protein; <b>PDBTitle:</b> nmr structure of the potassium channel fragment l45 in2 micelles
25	<a href="#">c3tweB</a>	Alignment	not modelled	9.6	67	<b>PDB header:</b> unknown function <b>Chain:</b> B: <b>PDB Molecule:</b> alpha4h; <b>PDBTitle:</b> crystal structure of the de novo designed peptide alpha4h
26	<a href="#">d2gaxa1</a>	Alignment	not modelled	9.5	34	<b>Fold:</b> Peptidyl-tRNA hydrolase II <b>Superfamily:</b> Peptidyl-tRNA hydrolase II <b>Family:</b> Peptidyl-tRNA hydrolase II
27	<a href="#">c3o27B</a>	Alignment	not modelled	9.5	29	<b>PDB header:</b> dna binding protein <b>Chain:</b> B: <b>PDB Molecule:</b> putative uncharacterized protein; <b>PDBTitle:</b> the crystal structure of c68 from the hybrid virus-plasmid pssvx
28	<a href="#">c4a19X</a>	Alignment	not modelled	9.3	13	<b>PDB header:</b> ribosome <b>Chain:</b> X: <b>PDB Molecule:</b> rpl18a; <b>PDBTitle:</b> t.thermophila 60s ribosomal subunit in complex with2 initiation factor 6. this file contains 26s rrna and3 proteins of molecule 2.

29	<a href="#">c3jtgA_</a>	Alignment	not modelled	9.1	33	<b>PDB header:</b> transcription <b>Chain:</b> A: <b>PDB Molecule:</b> ets-related transcription factor elf-3; <b>PDBTitle:</b> crystal structure of mouse elf3 c-terminal dna-binding domain in2 complex with type ii tgf-beta receptor promoter dna
30	<a href="#">d2j0sc1</a>	Alignment	not modelled	8.9	45	<b>Fold:</b> Mago nashi protein <b>Superfamily:</b> Mago nashi protein <b>Family:</b> Mago nashi protein
31	<a href="#">c4fe1X_</a>	Alignment	not modelled	8.8	15	<b>PDB header:</b> photosynthesis <b>Chain:</b> X: <b>PDB Molecule:</b> photosystem i 4.8k protein; <b>PDBTitle:</b> improving the accuracy of macromolecular structure refinement at 7 a2 resolution
32	<a href="#">c1jb0X_</a>	Alignment	not modelled	8.8	15	<b>PDB header:</b> photosynthesis <b>Chain:</b> X: <b>PDB Molecule:</b> photosystem i subunit psax; <b>PDBTitle:</b> crystal structure of photosystem i: a photosynthetic reaction center2 and core antenna system from cyanobacteria
33	<a href="#">d1jb0x_</a>	Alignment	not modelled	8.8	15	<b>Fold:</b> Single transmembrane helix <b>Superfamily:</b> Subunit Psax of photosystem I reaction centre <b>Family:</b> Subunit Psax of photosystem I reaction centre
34	<a href="#">c2bbdA_</a>	Alignment	not modelled	8.8	40	<b>PDB header:</b> viral protein <b>Chain:</b> A: <b>PDB Molecule:</b> coat protein; <b>PDBTitle:</b> crystal structure of the stiv mcp
35	<a href="#">c1kyqC_</a>	Alignment	not modelled	8.7	31	<b>PDB header:</b> oxidoreductase, lyase <b>Chain:</b> C: <b>PDB Molecule:</b> siroheme biosynthesis protein met8; <b>PDBTitle:</b> met8p: a bifunctional nad-dependent dehydrogenase and2 ferrochelatae involved in siroheme synthesis.
36	<a href="#">c3zpyB_</a>	Alignment	not modelled	8.5	24	<b>PDB header:</b> lyase <b>Chain:</b> B: <b>PDB Molecule:</b> alginate lyase, family pl7; <b>PDBTitle:</b> crystal structure of the marine pl7 alginate lyase alya12 from zobellia galactanivorans
37	<a href="#">c4gd3B_</a>	Alignment	not modelled	8.4	12	<b>PDB header:</b> oxidoreductase/electron transport <b>Chain:</b> B: <b>PDB Molecule:</b> ni/fe-hydrogenase 1 b-type cytochrome subunit; <b>PDBTitle:</b> structure of e. coli hydrogenase-1 in complex with cytochrome b
38	<a href="#">c4gd3A_</a>	Alignment	not modelled	8.4	12	<b>PDB header:</b> oxidoreductase/electron transport <b>Chain:</b> A: <b>PDB Molecule:</b> ni/fe-hydrogenase 1 b-type cytochrome subunit; <b>PDBTitle:</b> structure of e. coli hydrogenase-1 in complex with cytochrome b
39	<a href="#">c3izci_</a>	Alignment	not modelled	8.4	38	<b>PDB header:</b> ribosome <b>Chain:</b> I: <b>PDB Molecule:</b> 60s ribosomal protein rpl10 (l10e); <b>PDBTitle:</b> localization of the large subunit ribosomal proteins into a 6.1 a2 cryo-em map of saccharomyces cerevisiae translating 80s ribosome
40	<a href="#">c2islB_</a>	Alignment	not modelled	8.1	29	<b>PDB header:</b> flavoprotein <b>Chain:</b> B: <b>PDB Molecule:</b> blub; <b>PDBTitle:</b> blub bound to reduced flavin (fmnh2) and molecular oxygen.2 (clear crystal form)
41	<a href="#">c3iz5i_</a>	Alignment	not modelled	8.0	38	<b>PDB header:</b> ribosome <b>Chain:</b> I: <b>PDB Molecule:</b> 60s ribosomal protein l10 (l10e); <b>PDBTitle:</b> localization of the large subunit ribosomal proteins into a 5.5 a2 cryo-em map of triticum aestivum translating 80s ribosome
42	<a href="#">c1nybA_</a>	Alignment	not modelled	7.9	36	<b>PDB header:</b> transcription/rna <b>Chain:</b> A: <b>PDB Molecule:</b> probable regulatory protein n; <b>PDBTitle:</b> solution structure of the bacteriophage phi21 n peptide-boxb2 rna complex
43	<a href="#">c3lw6A_</a>	Alignment	not modelled	7.8	63	<b>PDB header:</b> transferase <b>Chain:</b> A: <b>PDB Molecule:</b> beta-4-galactosyltransferase 7; <b>PDBTitle:</b> crystal structure of drosophila beta1,4-galactosyltransferase-7
44	<a href="#">d1b9ha_</a>	Alignment	not modelled	7.4	17	<b>Fold:</b> PLP-dependent transferase-like <b>Superfamily:</b> PLP-dependent transferases <b>Family:</b> GABA-aminotransferase-like
45	<a href="#">d1oe4a_</a>	Alignment	not modelled	6.8	26	<b>Fold:</b> Uracil-DNA glycosylase-like <b>Superfamily:</b> Uracil-DNA glycosylase-like <b>Family:</b> Single-strand selective monofunctional uracil-DNA glycosylase SMUG1
46	<a href="#">d1kqfc_</a>	Alignment	not modelled	6.8	18	<b>Fold:</b> Heme-binding four-helical bundle <b>Superfamily:</b> Transmembrane di-heme cytochromes <b>Family:</b> Formate dehydrogenase N, cytochrome (gamma) subunit
47	<a href="#">d2frea1</a>	Alignment	not modelled	6.8	25	<b>Fold:</b> FMN-dependent nitroreductase-like <b>Superfamily:</b> FMN-dependent nitroreductase-like <b>Family:</b> NADH oxidase/flavin reductase
48	<a href="#">d1jvra_</a>	Alignment	not modelled	6.8	23	<b>Fold:</b> Retroviral matrix proteins <b>Superfamily:</b> Retroviral matrix proteins <b>Family:</b> HTLV-II matrix protein
49	<a href="#">c3a0hj_</a>	Alignment	not modelled	6.7	21	<b>PDB header:</b> electron transport <b>Chain:</b> J: <b>PDB Molecule:</b> photosystem ii reaction center protein j; <b>PDBTitle:</b> crystal structure of i-substituted photosystem ii complex
50	<a href="#">d2axtj1</a>	Alignment	not modelled	6.7	21	<b>Fold:</b> Single transmembrane helix <b>Superfamily:</b> Photosystem II reaction center protein J, Psbj <b>Family:</b> Psbj-like
51	<a href="#">c3j3bg_</a>	Alignment	not modelled	6.6	25	<b>PDB header:</b> ribosome <b>Chain:</b> G: <b>PDB Molecule:</b> 60s ribosomal protein l7a; <b>PDBTitle:</b> structure of the human 60s ribosomal proteins
52	<a href="#">d2iu5a2</a>	Alignment	not modelled	6.5	25	<b>Fold:</b> Tetracyclin repressor-like, C-terminal domain <b>Superfamily:</b> Tetracyclin repressor-like, C-terminal domain <b>Family:</b> Tetracyclin repressor-like, C-terminal domain
53	<a href="#">d3cx5d2</a>	Alignment	not modelled	6.4	50	<b>Fold:</b> Single transmembrane helix <b>Superfamily:</b> Cytochrome c1 subunit of cytochrome bc1 complex (Ubiquinol-cytochrome c reductase), transmembrane anchor <b>Family:</b> Cytochrome c1 subunit of cytochrome bc1 complex (Ubiquinol-cytochrome c reductase), transmembrane anchor
						<b>Fold:</b> Single transmembrane helix <b>Superfamily:</b> Cytochrome c1 subunit of cytochrome bc1 complex

54	<a href="#">d1ppid2</a>	Alignment	not modelled	6.2	63	(Ubiquinol-cytochrome c reductase), transmembrane anchor <b>Family:</b> Cytochrome c1 subunit of cytochrome bc1 complex (Ubiquinol-cytochrome c reductase), transmembrane anchor
55	<a href="#">c2zkrq_</a>	Alignment	not modelled	6.1	20	<b>PDB header:</b> ribosomal protein/rna <b>Chain:</b> Q: <b>PDB Molecule:</b> rna expansion segment es31 part ii; <b>PDBTitle:</b> structure of a mammalian ribosomal 60s subunit within an 80s complex2 obtained by docking homology models of the rna and proteins into an3 8.7 a cryo-em map
56	<a href="#">c3ge5A_</a>	Alignment	not modelled	6.1	18	<b>PDB header:</b> oxidoreductase <b>Chain:</b> A: <b>PDB Molecule:</b> putative nad(p)h:fmn oxidoreductase; <b>PDBTitle:</b> crystal structure of a putative nad(p)h:fmn oxidoreductase (pg0310)2 from porphyromonas gingivalis w83 at 1.70 a resolution
57	<a href="#">c1ckkB_</a>	Alignment	not modelled	6.1	25	<b>PDB header:</b> calmodulin-peptide complex <b>Chain:</b> B: <b>PDB Molecule:</b> protein (rat ca2+/calmodulin dependent protein <b>PDBTitle:</b> calmodulin/rat ca2+/calmodulin dependent protein kinase2 fragment
58	<a href="#">d1pv0a_</a>	Alignment	not modelled	6.0	27	<b>Fold:</b> Long alpha-hairpin <b>Superfamily:</b> Sporulation inhibitor Sda <b>Family:</b> Sporulation inhibitor Sda
59	<a href="#">d2e74f1</a>	Alignment	not modelled	5.9	46	<b>Fold:</b> Single transmembrane helix <b>Superfamily:</b> PetM subunit of the cytochrome b6f complex <b>Family:</b> PetM subunit of the cytochrome b6f complex
60	<a href="#">c3u5eS_</a>	Alignment	not modelled	5.9	37	<b>PDB header:</b> ribosome <b>Chain:</b> S: <b>PDB Molecule:</b> 60s ribosomal protein l20-a; <b>PDBTitle:</b> the structure of the eukaryotic ribosome at 3.0 a resolution. this2 entry contains proteins of the 60s subunit, ribosome a
61	<a href="#">c3j21d_</a>	Alignment	not modelled	5.9	36	<b>PDB header:</b> ribosome <b>Chain:</b> D: <b>PDB Molecule:</b> 50s ribosomal protein l4p; <b>PDBTitle:</b> promiscuous behavior of proteins in archaeal ribosomes revealed by2 cryo-em: implications for evolution of eukaryotic ribosomes (50s3 ribosomal proteins)
62	<a href="#">c3bemA_</a>	Alignment	not modelled	5.9	14	<b>PDB header:</b> oxidoreductase <b>Chain:</b> A: <b>PDB Molecule:</b> putative nad(p)h nitroreductase ydfn; <b>PDBTitle:</b> crystal structure of putative nitroreductase ydfn (2632848) from2 bacillus subtilis at 1.65 a resolution
63	<a href="#">c1q2iA_</a>	Alignment	not modelled	5.8	40	<b>PDB header:</b> antitumor protein <b>Chain:</b> A: <b>PDB Molecule:</b> pnc27; <b>PDBTitle:</b> nmr solution structure of a peptide from the mdm-2 binding2 domain of the p53 protein that is selectively cytotoxic to3 cancer cells
64	<a href="#">c3ho5B_</a>	Alignment	not modelled	5.8	69	<b>PDB header:</b> signaling protein <b>Chain:</b> B: <b>PDB Molecule:</b> hedgehog-interacting protein; <b>PDBTitle:</b> crystal structure of hedgehog-interacting protein (hhp) and sonic2 hedgehog (shh) complex
65	<a href="#">d1dp7p_</a>	Alignment	not modelled	5.7	15	<b>Fold:</b> DNA/RNA-binding 3-helical bundle <b>Superfamily:</b> "Winged helix" DNA-binding domain <b>Family:</b> P4 origin-binding domain-like
66	<a href="#">d1ef5a_</a>	Alignment	not modelled	5.6	40	<b>Fold:</b> beta-Grasp (ubiquitin-like) <b>Superfamily:</b> Ubiquitin-like <b>Family:</b> Ras-binding domain, RBD
67	<a href="#">d1k8ib2</a>	Alignment	not modelled	5.6	32	<b>Fold:</b> MHC antigen-recognition domain <b>Superfamily:</b> MHC antigen-recognition domain <b>Family:</b> MHC antigen-recognition domain
68	<a href="#">c2ebyA_</a>	Alignment	not modelled	5.6	12	<b>PDB header:</b> transcription <b>Chain:</b> A: <b>PDB Molecule:</b> putative hth-type transcriptional regulator ybaq; <b>PDBTitle:</b> crystal structure of a hypothetical protein from e. coli
69	<a href="#">c4a19L_</a>	Alignment	not modelled	5.2	44	<b>PDB header:</b> ribosome <b>Chain:</b> L: <b>PDB Molecule:</b> rpl34; <b>PDBTitle:</b> t.thermophila 60s ribosomal subunit in complex with2 initiation factor 6. this file contains 26s rrna and3 proteins of molecule 2.
70	<a href="#">c2kpmA_</a>	Alignment	not modelled	5.2	19	<b>PDB header:</b> structural genomics, unknown function <b>Chain:</b> A: <b>PDB Molecule:</b> uncharacterized protein; <b>PDBTitle:</b> solution nmr structure of uncharacterized protein from gene2 locus ne0665 of nitrosomonas europaea. northeast structural3 genomics target ner103a
71	<a href="#">c3j39g_</a>	Alignment	not modelled	5.1	58	<b>PDB header:</b> ribosome <b>Chain:</b> G: <b>PDB Molecule:</b> 60s ribosomal protein l7a; <b>PDBTitle:</b> structure of the d. melanogaster 60s ribosomal proteins
72	<a href="#">d2jxta1</a>	Alignment	not modelled	5.1	21	<b>Fold:</b> RplX-like <b>Superfamily:</b> RplX-like <b>Family:</b> RplX-like
73	<a href="#">c2zuuA_</a>	Alignment	not modelled	5.1	38	<b>PDB header:</b> transferase <b>Chain:</b> A: <b>PDB Molecule:</b> lacto-n-biose phosphorylase; <b>PDBTitle:</b> crystal structure of galacto-n-biose/lacto-n-biose i phosphorylase in2 complex with glcnac
74	<a href="#">c3mtvA_</a>	Alignment	not modelled	5.1	22	<b>PDB header:</b> hydrolase <b>Chain:</b> A: <b>PDB Molecule:</b> papain-like cysteine protease; <b>PDBTitle:</b> the crystal structure of the prrsv nonstructural protein nsp1
75	<a href="#">c1ujwB_</a>	Alignment	not modelled	5.1	44	<b>PDB header:</b> transport protein/hydrolase <b>Chain:</b> B: <b>PDB Molecule:</b> colicin e3; <b>PDBTitle:</b> structure of the complex between btub and colicin e3 receptor binding2 domain