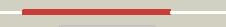
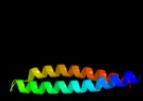
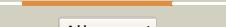
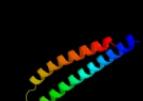
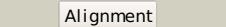
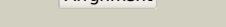
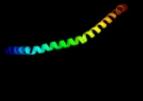
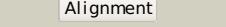
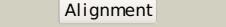
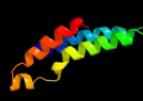
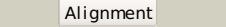
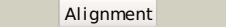
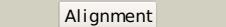


# Phyre<sup>2</sup>

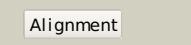
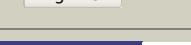
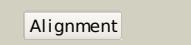
Email	i.a.kelley@imperial.ac.uk
Description	P64581
Date	Thu Jan 5 12:09:38 GMT 2012
Unique Job ID	4f469329aba5c50a

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	<a href="#">c1InfoA_</a>			91.4	15	<b>PDB header:</b> lipid transport <b>Chain:</b> A: <b>PDB Molecule:</b> apolipoprotein e2; <b>PDBTitle:</b> apolipoprotein e2 (apoe2, d154a mutation)
2	<a href="#">d1gsg9a_</a>			88.3	16	<b>Fold:</b> Four-helical up-and-down bundle <b>Superfamily:</b> Apolipoprotein <b>Family:</b> Apolipoprotein
3	<a href="#">c2x43S_</a>			80.0	8	<b>PDB header:</b> membrane protein <b>Chain:</b> S: <b>PDB Molecule:</b> sherp; <b>PDBTitle:</b> structural basis of molecular recognition by sherp at membrane2 surfaces
4	<a href="#">c3kdpG_</a>			72.3	31	<b>PDB header:</b> hydrolase <b>Chain:</b> G: <b>PDB Molecule:</b> na+/k+ atpase gamma subunit transcript variant a; <b>PDBTitle:</b> crystal structure of the sodium-potassium pump
5	<a href="#">c3kdpH_</a>			72.3	31	<b>PDB header:</b> hydrolase <b>Chain:</b> H: <b>PDB Molecule:</b> na+/k+ atpase gamma subunit transcript variant a; <b>PDBTitle:</b> crystal structure of the sodium-potassium pump
6	<a href="#">c3r2pA_</a>			60.9	13	<b>PDB header:</b> lipid transport <b>Chain:</b> A: <b>PDB Molecule:</b> apolipoprotein a-i; <b>PDBTitle:</b> 2.2 angstrom crystal structure of c terminal truncated human2 apolipoprotein a-i reveals the assembly of hdl by dimerization.
7	<a href="#">c1av1B_</a>			58.8	12	<b>PDB header:</b> lipid transport <b>Chain:</b> B: <b>PDB Molecule:</b> apolipoprotein a-i; <b>PDBTitle:</b> crystal structure of human apolipoprotein a-i
8	<a href="#">d1eqla_</a>			41.8	19	<b>Fold:</b> Apolipophorin-III <b>Superfamily:</b> Apolipophorin-III <b>Family:</b> Apolipophorin-III
9	<a href="#">c2a01B_</a>			39.4	21	<b>PDB header:</b> lipid transport <b>Chain:</b> B: <b>PDB Molecule:</b> apolipoprotein a-i; <b>PDBTitle:</b> crystal structure of lipid-free human apolipoprotein a-i
10	<a href="#">c3gvmA_</a>			35.3	7	<b>PDB header:</b> viral protein <b>Chain:</b> A: <b>PDB Molecule:</b> putative uncharacterized protein sag1039; <b>PDBTitle:</b> structure of the homodimeric wxg-100 family protein from streptococcus2 agalactiae
11	<a href="#">c2jwaA_</a>			31.4	38	<b>PDB header:</b> transferase <b>Chain:</b> A: <b>PDB Molecule:</b> receptor tyrosine-protein kinase erbB-2; <b>PDBTitle:</b> erbB2 transmembrane segment dimer spatial structure

12	<a href="#">d1wa8b1</a>			25.6	11	<b>Fold:</b> Ferritin-like <b>Superfamily:</b> EsxAB dimer-like <b>Family:</b> ESAT-6 like
13	<a href="#">d1ryka</a>			24.7	5	<b>Fold:</b> SAM domain-like <b>Superfamily:</b> Hypothetical protein Yjbj <b>Family:</b> Hypothetical protein Yjbj
14	<a href="#">c2vs0B</a>			23.6	11	<b>PDB header:</b> cell invasion <b>Chain:</b> B; <b>PDB Molecule:</b> virulence factor esxa; <b>PDBTitle:</b> structural analysis of homodimeric staphylococcal aureus2 virulence factor esxa
15	<a href="#">d1i6la</a>			23.4	14	<b>Fold:</b> Adenine nucleotide alpha hydrolase-like <b>Superfamily:</b> Nucleotidyl transferase <b>Family:</b> Class I aminoacyl-tRNA synthetases (RS), catalytic domain
16	<a href="#">c3prhB</a>			22.7	18	<b>PDB header:</b> ligase <b>Chain:</b> B; <b>PDB Molecule:</b> tryptophanyl-trna synthetase; <b>PDBTitle:</b> tryptophanyl-trna synthetase val144pro mutant from b. subtilis
17	<a href="#">d2ooca1</a>			21.5	14	<b>Fold:</b> Four-helical up-and-down bundle <b>Superfamily:</b> Histidine-containing phosphotransfer domain, HPT domain <b>Family:</b> SphA-like
18	<a href="#">c1p58F</a>			21.4	15	<b>PDB header:</b> virus <b>Chain:</b> F; <b>PDB Molecule:</b> envelope protein m; <b>PDBTitle:</b> complex organization of dengue virus membrane proteins as revealed by 2.9 angstrom cryo-em reconstruction
19	<a href="#">c3e0sA</a>			21.4	23	<b>PDB header:</b> structural genomics, unknown function <b>Chain:</b> A; <b>PDB Molecule:</b> uncharacterized protein; <b>PDBTitle:</b> crystal structure of an uncharacterized protein from 2 chlorobium tepidum
20	<a href="#">c3lw5K</a>			20.1	44	<b>PDB header:</b> photosynthesis <b>Chain:</b> K; <b>PDB Molecule:</b> photosystem i reaction center subunit x psak; <b>PDBTitle:</b> improved model of plant photosystem i
21	<a href="#">c215bA</a>		not modelled	19.4	29	<b>PDB header:</b> apoptosis <b>Chain:</b> A; <b>PDB Molecule:</b> activator of apoptosis harakiri; <b>PDBTitle:</b> solution structure of the transmembrane domain of bcl-2 member2 harakiri in micelles
22	<a href="#">d2gtsa1</a>		not modelled	17.1	16	<b>Fold:</b> Ferritin-like <b>Superfamily:</b> HP0062-like <b>Family:</b> HP0062-like
23	<a href="#">d1wa8a1</a>		not modelled	16.7	12	<b>Fold:</b> Ferritin-like <b>Superfamily:</b> EsxAB dimer-like <b>Family:</b> ESAT-6 like
24	<a href="#">d1nekD</a>		not modelled	16.5	7	<b>Fold:</b> Heme-binding four-helical bundle <b>Superfamily:</b> Fumarate reductase respiratory complex transmembrane subunits <b>Family:</b> Succinate dehydrogenase/Fumarate reductase transmembrane subunits (SdhC/FrdC and SdhD/FrdD)
25	<a href="#">c3onjA</a>		not modelled	12.0	9	<b>PDB header:</b> protein transport <b>Chain:</b> A; <b>PDB Molecule:</b> t-snare vti1; <b>PDBTitle:</b> crystal structure of yeast vti1p_habc domain
26	<a href="#">d1vcsa1</a>		not modelled	11.8	11	<b>Fold:</b> STAT-like <b>Superfamily:</b> t-snare proteins <b>Family:</b> t-snare proteins
27	<a href="#">d1s35a1</a>		not modelled	11.7	12	<b>Fold:</b> Spectrin repeat-like <b>Superfamily:</b> Spectrin repeat <b>Family:</b> Spectrin repeat
28	<a href="#">d1c99a</a>		not modelled	10.0	28	<b>Fold:</b> Transmembrane helix hairpin <b>Superfamily:</b> F1FO ATP synthase subunit C <b>Family:</b> F1FO ATP synthase subunit C
						<b>PDB header:</b> cell adhesion

29	<a href="#">c2kncB</a>	Alignment	not modelled	9.7	5	<b>Chain:</b> B; <b>PDB Molecule:</b> integrin beta-3; <b>PDBTitle:</b> platelet integrin alfa1beta1beta3 transmembrane-cytoplasmic2 heterocomplex
30	<a href="#">d1eiyal</a>	Alignment	not modelled	9.5	23	<b>Fold:</b> Long alpha-hairpin <b>Superfamily:</b> tRNA-binding arm <b>Family:</b> Phenylalanyl-tRNA synthetase (PheRS)
31	<a href="#">d1k75a</a>	Alignment	not modelled	9.3	10	<b>Fold:</b> ALDH-like <b>Superfamily:</b> ALDH-like <b>Family:</b> L-histidinol dehydrogenase HisD
32	<a href="#">d1f16a</a>	Alignment	not modelled	8.9	21	<b>Fold:</b> Toxins' membrane translocation domains <b>Superfamily:</b> Bcl-2 inhibitors of programmed cell death <b>Family:</b> Bcl-2 inhibitors of programmed cell death
33	<a href="#">c2g36A</a>	Alignment	not modelled	8.3	16	<b>PDB header:</b> ligase <b>Chain:</b> A; <b>PDB Molecule:</b> tryptophanyl-tRNA synthetase; <b>PDBTitle:</b> crystal structure of tryptophanyl-tRNA synthetase (ec 6.1.1.2) (tryptophanyl-tRNA ligase)(trprs) (tm0492) from thermotoga maritima at 2.50 a resolution
34	<a href="#">c3py7A</a>	Alignment	not modelled	7.9	14	<b>PDB header:</b> viral protein <b>Chain:</b> A; <b>PDB Molecule:</b> maltose-binding periplasmic protein,paxillin1Id1,protein e6 <b>PDBTitle:</b> crystal structure of full-length bovine papillomavirus oncogene e62 in complex with Id1 motif of paxillin at 2.3a resolution
35	<a href="#">c1n54A</a>	Alignment	not modelled	7.8	19	<b>PDB header:</b> RNA binding protein <b>Chain:</b> A; <b>PDB Molecule:</b> 80 kDa nuclear cap binding protein; <b>PDBTitle:</b> cap binding complex m7GpppG free
36	<a href="#">c2kbvA</a>	Alignment	not modelled	7.8	30	<b>PDB header:</b> membrane protein <b>Chain:</b> A; <b>PDB Molecule:</b> sodium/hydrogen exchanger 1; <b>PDBTitle:</b> structural and functional analysis of tm xi of the NHE12 isoform of the Na+/H+ exchanger
37	<a href="#">c2j5dA</a>	Alignment	not modelled	7.6	16	<b>PDB header:</b> membrane protein <b>Chain:</b> A; <b>PDB Molecule:</b> bcl2/adenovirus E1b 19 kDa protein-interacting <b>PDBTitle:</b> nmr structure of bnip3 transmembrane domain in lipid2 bicelles
38	<a href="#">d1q2ha</a>	Alignment	not modelled	7.6	20	<b>Fold:</b> Dimerisation interlock <b>Superfamily:</b> Phenylalanine zipper <b>Family:</b> Adapter protein APS, dimerisation domain
39	<a href="#">c2v8sV</a>	Alignment	not modelled	7.2	15	<b>PDB header:</b> protein transport <b>Chain:</b> V; <b>PDB Molecule:</b> vesicle transport through interaction with <b>PDBTitle:</b> vti1b habc domain - epsinR enth domain complex
40	<a href="#">c2ww9B</a>	Alignment	not modelled	7.1	21	<b>PDB header:</b> ribosome <b>Chain:</b> B; <b>PDB Molecule:</b> protein transport protein SSS1; <b>PDBTitle:</b> cryo-em structure of the active yeast Ssh1 complex bound to the yeast 80S ribosome
41	<a href="#">c1yi8C</a>	Alignment	not modelled	7.1	13	<b>PDB header:</b> ligase <b>Chain:</b> C; <b>PDB Molecule:</b> tryptophanyl-tRNA synthetase; <b>PDBTitle:</b> crystal structure of tryptophanyl tRNA synthetase II from deinococcus2 radiodurans in complex with L-trp
42	<a href="#">c1q90L</a>	Alignment	not modelled	7.1	27	<b>PDB header:</b> photosynthesis <b>Chain:</b> L; <b>PDB Molecule:</b> cytochrome b6f complex subunit petI; <b>PDBTitle:</b> structure of the cytochrome b6f (plastoquinone: plastocyanin2 oxidoreductase) from chlamydomonas reinhardtii
43	<a href="#">d1q90I</a>	Alignment	not modelled	7.1	27	<b>Fold:</b> Single transmembrane helix <b>Superfamily:</b> PetL subunit of the cytochrome b6f complex <b>Family:</b> PetL subunit of the cytochrome b6f complex
44	<a href="#">c1ywwA</a>	Alignment	not modelled	6.9	6	<b>PDB header:</b> structural genomics, unknown function <b>Chain:</b> A; <b>PDB Molecule:</b> hypothetical protein pa4738; <b>PDBTitle:</b> nmr structure of p. aeruginosa protein pa4738: northeast2 structural genomics consortium target pap2
45	<a href="#">c1xq8A</a>	Alignment	not modelled	6.8	18	<b>PDB header:</b> lipid binding protein <b>Chain:</b> A; <b>PDB Molecule:</b> alpha-synuclein; <b>PDBTitle:</b> human micelle-bound alpha-synuclein
46	<a href="#">c3hd7A</a>	Alignment	not modelled	6.7	14	<b>PDB header:</b> exocytosis <b>Chain:</b> A; <b>PDB Molecule:</b> vesicle-associated membrane protein 2; <b>PDBTitle:</b> helical extension of the neuronal snare complex into the membrane,2 spacegroup c 1 2 1
47	<a href="#">c2p2uA</a>	Alignment	not modelled	6.6	10	<b>PDB header:</b> dna binding protein <b>Chain:</b> A; <b>PDB Molecule:</b> host-nuclease inhibitor protein gam, putative; <b>PDBTitle:</b> crystal structure of putative host-nuclease inhibitor2 protein gam from desulfovibrio vulgaris
48	<a href="#">d1l2pa</a>	Alignment	not modelled	6.5	13	<b>Fold:</b> Single transmembrane helix <b>Superfamily:</b> F1F0 ATP synthase subunit B, membrane domain <b>Family:</b> F1F0 ATP synthase subunit B, membrane domain
49	<a href="#">c3m5wB</a>	Alignment	not modelled	6.3	17	<b>PDB header:</b> ligase <b>Chain:</b> B; <b>PDB Molecule:</b> tryptophanyl-tRNA synthetase; <b>PDBTitle:</b> crystal structure of tryptophanyl-tRNA synthetase from campylobacter jejuni
50	<a href="#">c3b9yA</a>	Alignment	not modelled	6.3	21	<b>PDB header:</b> transport protein <b>Chain:</b> A; <b>PDB Molecule:</b> ammonium transporter family rh-like protein; <b>PDBTitle:</b> crystal structure of the nitrosomonas europaea rh protein
51	<a href="#">d1szia</a>	Alignment	not modelled	6.1	22	<b>Fold:</b> Four-helical up-and-down bundle <b>Superfamily:</b> Mannose-6-phosphate receptor binding protein 1 (Tip47), C-terminal domain <b>Family:</b> Mannose-6-phosphate receptor binding protein 1 (Tip47), C-terminal domain
52	<a href="#">d1tqga</a>	Alignment	not modelled	6.0	10	<b>Fold:</b> Four-helical up-and-down bundle <b>Superfamily:</b> Histidine-containing phosphotransfer domain, HPT domain <b>Family:</b> Chemotaxis protein CheA P1 domain
53	<a href="#">c3kb8A</a>	Alignment	not modelled	5.9	14	<b>PDB header:</b> transferase <b>Chain:</b> A; <b>PDB Molecule:</b> hypoxanthine phosphoribosyltransferase; <b>PDBTitle:</b> 2.09 angstrom resolution structure of a hypoxanthine-guanine2 phosphoribosyltransferase (hpt-1) from bacillus anthracis str. 'ames3 ancestor' in complex with gmp

54	<a href="#">d2o97b1</a>		not modelled	5.6	16	<b>Fold:</b> IHF-like DNA-binding proteins <b>Superfamily:</b> IHF-like DNA-binding proteins <b>Family:</b> Prokaryotic DNA-bending protein
55	<a href="#">c2ka2A</a>		not modelled	5.6	16	<b>PDB header:</b> membrane protein <b>Chain:</b> A: <b>PDB Molecule:</b> bcl2/adenovirus e1b 19 kda protein-interacting <b>PDBTitle:</b> solution nmr structure of bnip3 transmembrane peptide dimer2 in detergent micelles with his173-ser172 intermonomer3 hydrogen bond restraints
56	<a href="#">c2ka1B</a>		not modelled	5.6	16	<b>PDB header:</b> membrane protein <b>Chain:</b> B: <b>PDB Molecule:</b> bcl2/adenovirus e1b 19 kda protein-interacting <b>PDBTitle:</b> solution nmr structure of bnip3 transmembrane peptide dimer2 in detergent micelles
57	<a href="#">c2ks1B</a>		not modelled	5.5	14	<b>PDB header:</b> transferase <b>Chain:</b> B: <b>PDB Molecule:</b> epidermal growth factor receptor; <b>PDBTitle:</b> heterodimeric association of transmembrane domains of erbB1 and erbB2 receptors enabling kinase activation
58	<a href="#">c2k1IB</a>		not modelled	5.5	31	<b>PDB header:</b> signaling protein <b>Chain:</b> B: <b>PDB Molecule:</b> ephrin type-a receptor 1; <b>PDBTitle:</b> nmr structures of dimeric transmembrane domain of the2 receptor tyrosine kinase ephA1 in lipid bicolles at ph 6.3
59	<a href="#">c2k1IA</a>		not modelled	5.5	31	<b>PDB header:</b> signaling protein <b>Chain:</b> A: <b>PDB Molecule:</b> ephrin type-a receptor 1; <b>PDBTitle:</b> nmr structures of dimeric transmembrane domain of the2 receptor tyrosine kinase ephA1 in lipid bicolles at ph 6.3
60	<a href="#">c2k1kA</a>		not modelled	5.5	31	<b>PDB header:</b> signaling protein <b>Chain:</b> A: <b>PDB Molecule:</b> ephrin type-a receptor 1; <b>PDBTitle:</b> nmr structures of dimeric transmembrane domain of the2 receptor tyrosine kinase ephA1 in lipid bicolles at ph 4.3
61	<a href="#">c2k1kB</a>		not modelled	5.5	31	<b>PDB header:</b> signaling protein <b>Chain:</b> B: <b>PDB Molecule:</b> ephrin type-a receptor 1; <b>PDBTitle:</b> nmr structures of dimeric transmembrane domain of the2 receptor tyrosine kinase ephA1 in lipid bicolles at ph 4.3
62	<a href="#">d1dqna</a>		not modelled	5.5	19	<b>Fold:</b> PRTase-like <b>Superfamily:</b> PRTase-like <b>Family:</b> Phosphoribosyltransferases (PRTases)
63	<a href="#">d1g9sa</a>		not modelled	5.5	14	<b>Fold:</b> PRTase-like <b>Superfamily:</b> PRTase-like <b>Family:</b> Phosphoribosyltransferases (PRTases)
64	<a href="#">c2el7A</a>		not modelled	5.3	25	<b>PDB header:</b> ligase <b>Chain:</b> A: <b>PDB Molecule:</b> tryptophanyl-trna synthetase; <b>PDBTitle:</b> crystal structure of tryptophanyl-trna synthetase from thermus2 thermophilus
65	<a href="#">c2hroA</a>		not modelled	5.3	15	<b>PDB header:</b> transferase <b>Chain:</b> A: <b>PDB Molecule:</b> phosphoenolpyruvate-protein phosphotransferase; <b>PDBTitle:</b> structure of the full-length enzyme i of the pts system from staphylococcus carnosus
66	<a href="#">c2ka2B</a>		not modelled	5.2	13	<b>PDB header:</b> membrane protein <b>Chain:</b> B: <b>PDB Molecule:</b> bcl2/adenovirus e1b 19 kda protein-interacting <b>PDBTitle:</b> solution nmr structure of bnip3 transmembrane peptide dimer2 in detergent micelles with his173-ser172 intermonomer3 hydrogen bond restraints
67	<a href="#">c2ka1A</a>		not modelled	5.2	13	<b>PDB header:</b> membrane protein <b>Chain:</b> A: <b>PDB Molecule:</b> bcl2/adenovirus e1b 19 kda protein-interacting <b>PDBTitle:</b> solution nmr structure of bnip3 transmembrane peptide dimer2 in detergent micelles