





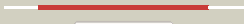


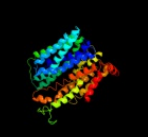

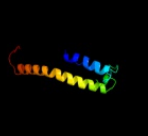

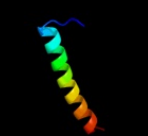



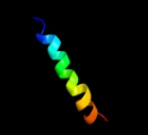



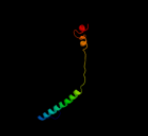
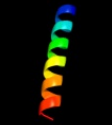


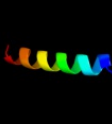
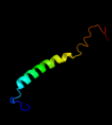

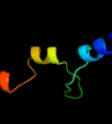

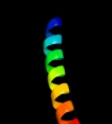


# Phyre2

Email	I.a.kelley@imperial.ac.uk
Description	P0CE44
Date	Wed Jan 25 15:20:35 GMT 2012
Unique Job ID	c52b06712a584540

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	<a href="#">d1pv7a_</a>	 Alignment		99.9	13	<b>Fold:</b> MFS general substrate transporter <b>Superfamily:</b> MFS general substrate transporter <b>Family:</b> LacY-like proton/sugar symporter
2	<a href="#">d1pw4a_</a>	 Alignment		99.9	13	<b>Fold:</b> MFS general substrate transporter <b>Superfamily:</b> MFS general substrate transporter <b>Family:</b> Glycerol-3-phosphate transporter
3	<a href="#">c2gfpA_</a>	 Alignment		99.8	14	<b>PDB header:</b> membrane protein <b>Chain:</b> A: <b>PDB Molecule:</b> multidrug resistance protein d; <b>PDBTitle:</b> structure of the multidrug transporter emrd from2 escherichia coli
4	<a href="#">c3o7pA_</a>	 Alignment		99.8	15	<b>PDB header:</b> transport protein <b>Chain:</b> A: <b>PDB Molecule:</b> l-fucose-proton symporter; <b>PDBTitle:</b> crystal structure of the e.coli fucose:proton symporter, fucp (n162a)
5	<a href="#">c2xutC_</a>	 Alignment		99.7	11	<b>PDB header:</b> transport protein <b>Chain:</b> C: <b>PDB Molecule:</b> proton/peptide symporter family protein; <b>PDBTitle:</b> crystal structure of a proton dependent oligopeptide (pot)2 family transporter.
6	<a href="#">c3qngD_</a>	 Alignment		53.5	14	<b>PDB header:</b> membrane protein, transport protein <b>Chain:</b> D: <b>PDB Molecule:</b> pts system, cellobiose-specific iic component; <b>PDBTitle:</b> crystal structure of the transporter chbc, the iic component from the2 n,n'-diacetylchitobiose-specific phosphotransferase system
7	<a href="#">d2f23a1</a>	 Alignment		52.7	10	<b>Fold:</b> Long alpha-hairpin <b>Superfamily:</b> GreA transcript cleavage protein, N-terminal domain <b>Family:</b> GreA transcript cleavage protein, N-terminal domain
8	<a href="#">d1grja1</a>	 Alignment		36.1	24	<b>Fold:</b> Long alpha-hairpin <b>Superfamily:</b> GreA transcript cleavage protein, N-terminal domain <b>Family:</b> GreA transcript cleavage protein, N-terminal domain
9	<a href="#">c1by0A_</a>	 Alignment		28.0	28	<b>PDB header:</b> rna binding protein <b>Chain:</b> A: <b>PDB Molecule:</b> protein (hepatitis delta antigen); <b>PDBTitle:</b> n-terminal leucine-repeat region of hepatitis delta antigen
10	<a href="#">d1ji6a3</a>	 Alignment		20.1	14	<b>Fold:</b> Toxins' membrane translocation domains <b>Superfamily:</b> delta-Endotoxin (insecticide), N-terminal domain <b>Family:</b> delta-Endotoxin (insecticide), N-terminal domain
11	<a href="#">d1f6ga_</a>	 Alignment		18.6	13	<b>Fold:</b> Voltage-gated potassium channels <b>Superfamily:</b> Voltage-gated potassium channels <b>Family:</b> Voltage-gated potassium channels

12	<a href="#">c2q7cC_</a>	Alignment		18.2	22	<b>PDB header:</b> viral protein <b>Chain:</b> C: <b>PDB Molecule:</b> fusion protein between yeast variant gcn4 and <b>PDBTitle:</b> crystal structure of iqn17
13	<a href="#">c1m46B_</a>	Alignment		15.6	29	<b>PDB header:</b> cell cycle protein <b>Chain:</b> B: <b>PDB Molecule:</b> iq4 motif from myo2p, a class v myosin; <b>PDBTitle:</b> crystal structure of mlc1p bound to iq4 of myo2p, a class v2 myosin
14	<a href="#">d1xmpa_</a>	Alignment		15.6	10	<b>Fold:</b> Flavodoxin-like <b>Superfamily:</b> N5-CAIR mutase (phosphoribosylaminoimidazole carboxylase, PurE) <b>Family:</b> N5-CAIR mutase (phosphoribosylaminoimidazole carboxylase, PurE)
15	<a href="#">c1zxaB_</a>	Alignment		13.8	19	<b>PDB header:</b> transferase <b>Chain:</b> B: <b>PDB Molecule:</b> cgmp-dependent protein kinase 1, alpha isozyme; <b>PDBTitle:</b> solution structure of the coiled-coil domain of cgmp-2 dependent protein kinase ia
16	<a href="#">c2kncA_</a>	Alignment		12.6	13	<b>PDB header:</b> cell adhesion <b>Chain:</b> A: <b>PDB Molecule:</b> integrin alpha-iiB; <b>PDBTitle:</b> platelet integrin alphaIIb-beta3 transmembrane-cytoplasmic2 heterocomplex
17	<a href="#">d2ce7a1</a>	Alignment		11.7	13	<b>Fold:</b> FtsH protease domain-like <b>Superfamily:</b> FtsH protease domain-like <b>Family:</b> FtsH protease domain-like
18	<a href="#">d2oara1</a>	Alignment		11.1	18	<b>Fold:</b> Gated mechanosensitive channel <b>Superfamily:</b> Gated mechanosensitive channel <b>Family:</b> Gated mechanosensitive channel
19	<a href="#">c1a92B_</a>	Alignment		10.7	29	<b>PDB header:</b> leucine zipper <b>Chain:</b> B: <b>PDB Molecule:</b> delta antigen; <b>PDBTitle:</b> oligomerization domain of hepatitis delta antigen
20	<a href="#">c2oqqB_</a>	Alignment		10.2	16	<b>PDB header:</b> transcription <b>Chain:</b> B: <b>PDB Molecule:</b> transcription factor hy5; <b>PDBTitle:</b> crystal structure of hy5 leucine zipper homodimer from2 arabidopsis thaliana
21	<a href="#">c3onoA_</a>	Alignment	not modelled	9.7	14	<b>PDB header:</b> isomerase <b>Chain:</b> A: <b>PDB Molecule:</b> ribose/galactose isomerase; <b>PDBTitle:</b> crystal structure of ribose-5-phosphate isomerase lacab_rpiB from2 vibrio parahaemolyticus
22	<a href="#">d1u69a_</a>	Alignment	not modelled	9.4	27	<b>Fold:</b> Glyoxalase/Bleomycin resistance protein/Dihydroxybiphenyl dioxygenase <b>Superfamily:</b> Glyoxalase/Bleomycin resistance protein/Dihydroxybiphenyl dioxygenase <b>Family:</b> 3-demethylubiquinone-9 3-methyltransferase
23	<a href="#">c1ji6A_</a>	Alignment	not modelled	9.2	14	<b>PDB header:</b> toxin <b>Chain:</b> A: <b>PDB Molecule:</b> pesticidal crystal protein cry3bb; <b>PDBTitle:</b> crystal structure of the insecticidal bacterial del2 endotoxin cry3bb1 bacillus thuringiensis
24	<a href="#">c3jqhA_</a>	Alignment	not modelled	9.1	24	<b>PDB header:</b> sugar binding protein <b>Chain:</b> A: <b>PDB Molecule:</b> c-type lectin domain family 4 member m; <b>PDBTitle:</b> structure of the neck region of the glycan-binding receptor2 dc-signr
25	<a href="#">d1ab4a_</a>	Alignment	not modelled	9.0	13	<b>Fold:</b> Type II DNA topoisomerase <b>Superfamily:</b> Type II DNA topoisomerase <b>Family:</b> Type II DNA topoisomerase
26	<a href="#">c2wl2B_</a>	Alignment	not modelled	8.8	13	<b>PDB header:</b> isomerase <b>Chain:</b> B: <b>PDB Molecule:</b> dna gyrase subunit a; <b>PDBTitle:</b> crystal structure of n-terminal domain of gyra with the2 antibiotic simocyclinone d8
27	<a href="#">c3eh0C_</a>	Alignment	not modelled	8.7	8	<b>PDB header:</b> transferase <b>Chain:</b> C: <b>PDB Molecule:</b> udp-3-o-[3-hydroxymyristoyl] glucosamine n- <b>PDBTitle:</b> crystal structure of lpxd from escherichia coli
28	<a href="#">d1oqwa_</a>	Alignment	not modelled	8.6	13	<b>Fold:</b> Pili subunits <b>Superfamily:</b> Pili subunits <b>Family:</b> Pilin

29	<a href="#">d2pila_</a>	Alignment	not modelled	8.4	11	<b>Fold:</b> Pili subunits <b>Superfamily:</b> Pili subunits <b>Family:</b> Pilin
30	<a href="#">c2l5gA_</a>	Alignment	not modelled	8.4	13	<b>PDB header:</b> transcription regulator <b>Chain:</b> A: <b>PDB Molecule:</b> g protein pathway suppressor 2; <b>PDBTitle:</b> co-ordinates and 1h, 13c and 15n chemical shift assignments for the2 complex of gps2 53-90 and smrt 167-207
31	<a href="#">c2nuxB_</a>	Alignment	not modelled	8.4	35	<b>PDB header:</b> lyase <b>Chain:</b> B: <b>PDB Molecule:</b> 2-keto-3-deoxygluconate/2-keto-3-deoxy-6-phospho gluconate <b>PDBTitle:</b> 2-keto-3-deoxygluconate aldolase from sulfolobus acidocaldarius,2 native structure in p6522 at 2.5 a resolution
32	<a href="#">c2hjmB_</a>	Alignment	not modelled	8.1	10	<b>PDB header:</b> structural genomics, unknown function <b>Chain:</b> B: <b>PDB Molecule:</b> hypothetical protein pf1176; <b>PDBTitle:</b> crystal structure of a singleton protein pf1176 from p. furiosus
33	<a href="#">c2kwyA_</a>	Alignment	not modelled	7.9	19	<b>PDB header:</b> proton transport <b>Chain:</b> A: <b>PDB Molecule:</b> v-type proton atpase subunit g; <b>PDBTitle:</b> structure of g61-101
34	<a href="#">c1l4aE_</a>	Alignment	not modelled	7.8	12	<b>PDB header:</b> endocytosis/exocytosis <b>Chain:</b> E: <b>PDB Molecule:</b> synaphin a; <b>PDBTitle:</b> x-ray structure of the neuronal complexin/snare complex2 from the squid loligo pealei
35	<a href="#">c2jo8B_</a>	Alignment	not modelled	7.7	24	<b>PDB header:</b> transferase <b>Chain:</b> B: <b>PDB Molecule:</b> serine/threonine-protein kinase 4; <b>PDBTitle:</b> solution structure of c-terminal domain of human mammalian2 sterile 20-like kinase 1 (mst1)
36	<a href="#">c2kmfA_</a>	Alignment	not modelled	7.7	20	<b>PDB header:</b> photosynthesis <b>Chain:</b> A: <b>PDB Molecule:</b> photosystem ii 11 kda protein; <b>PDBTitle:</b> solution structure of psb27 from cyanobacterial photosystem2 ii
37	<a href="#">d2h8aa1</a>	Alignment	not modelled	7.7	7	<b>Fold:</b> MAPEG domain-like <b>Superfamily:</b> MAPEG domain-like <b>Family:</b> MAPEG domain
38	<a href="#">c2novD_</a>	Alignment	not modelled	7.6	21	<b>PDB header:</b> isomerase <b>Chain:</b> D: <b>PDB Molecule:</b> dna topoisomerase 4 subunit a; <b>PDBTitle:</b> breakage-reunion domain of s.pneumoniae topo iv: crystal2 structure of a gram-positive quinolone target
39	<a href="#">c2w8aC_</a>	Alignment	not modelled	7.0	9	<b>PDB header:</b> membrane protein <b>Chain:</b> C: <b>PDB Molecule:</b> glycine betaine transporter betp; <b>PDBTitle:</b> crystal structure of the sodium-coupled glycine betaine2 symporter betp from corynebacterium glutamicum with bound3 substrate
40	<a href="#">c3eb7B_</a>	Alignment	not modelled	6.9	18	<b>PDB header:</b> toxin <b>Chain:</b> B: <b>PDB Molecule:</b> insecticidal delta-endotoxin cry8ea1; <b>PDBTitle:</b> crystal structure of insecticidal delta-endotoxin cry8ea1 from2 bacillus thuringiensis at 2.2 angstroms resolution
41	<a href="#">c2y6xA_</a>	Alignment	not modelled	6.7	20	<b>PDB header:</b> photosynthesis <b>Chain:</b> A: <b>PDB Molecule:</b> photosystem ii 11 kd protein; <b>PDBTitle:</b> structure of psb27 from thermosynechococcus elongatus
42	<a href="#">c2xzrA_</a>	Alignment	not modelled	6.7	16	<b>PDB header:</b> cell adhesion <b>Chain:</b> A: <b>PDB Molecule:</b> immunoglobulin-binding protein eibd; <b>PDBTitle:</b> escherichia coli immunoglobulin-binding protein eibd 391-438 fused2 to gcn4 adaptors
43	<a href="#">d2cqea1</a>	Alignment	not modelled	6.7	11	<b>Fold:</b> CCCH zinc finger <b>Superfamily:</b> CCCH zinc finger <b>Family:</b> CCCH zinc finger
44	<a href="#">d1fx0a1</a>	Alignment	not modelled	6.7	11	<b>Fold:</b> Left-handed superhelix <b>Superfamily:</b> C-terminal domain of alpha and beta subunits of F1 ATP synthase <b>Family:</b> C-terminal domain of alpha and beta subunits of F1 ATP synthase
45	<a href="#">d1ez4a2</a>	Alignment	not modelled	6.6	23	<b>Fold:</b> LDH C-terminal domain-like <b>Superfamily:</b> LDH C-terminal domain-like <b>Family:</b> Lactate & malate dehydrogenases, C-terminal domain
46	<a href="#">c1tjID_</a>	Alignment	not modelled	6.5	0	<b>PDB header:</b> transcription <b>Chain:</b> D: <b>PDB Molecule:</b> dnak suppressor protein; <b>PDBTitle:</b> crystal structure of transcription factor dkxa from e. coli
47	<a href="#">c3c5yD_</a>	Alignment	not modelled	6.5	10	<b>PDB header:</b> isomerase <b>Chain:</b> D: <b>PDB Molecule:</b> ribose/galactose isomerase; <b>PDBTitle:</b> crystal structure of a putative ribose 5-phosphate isomerase2 (saro_3514) from novosphingobium aromaticivorans dsm at 1.81 a3 resolution
48	<a href="#">d1i9za_</a>	Alignment	not modelled	6.1	22	<b>Fold:</b> DNase I-like <b>Superfamily:</b> DNase I-like <b>Family:</b> Inositol polyphosphate 5-phosphatase (IPP5)
49	<a href="#">c1zvua_</a>	Alignment	not modelled	6.0	18	<b>PDB header:</b> isomerase <b>Chain:</b> A: <b>PDB Molecule:</b> topoisomerase iv subunit a; <b>PDBTitle:</b> structure of the full-length e. coli parc subunit
50	<a href="#">c3qx3B_</a>	Alignment	not modelled	5.9	18	<b>PDB header:</b> isomerase/dna/isomerase inhibitor <b>Chain:</b> B: <b>PDB Molecule:</b> dna topoisomerase 2-beta; <b>PDBTitle:</b> human topoisomerase iibeta in complex with dna and etoposide
51	<a href="#">c2rpaA_</a>	Alignment	not modelled	5.9	24	<b>PDB header:</b> hydrolase <b>Chain:</b> A: <b>PDB Molecule:</b> katanin p60 atpase-containing subunit a1; <b>PDBTitle:</b> the solution structure of n-terminal domain of microtubule severing2 enzyme
52	<a href="#">c3ilwA_</a>	Alignment	not modelled	5.9	11	<b>PDB header:</b> isomerase <b>Chain:</b> A: <b>PDB Molecule:</b> dna gyrase subunit a; <b>PDBTitle:</b> structure of dna gyrase subunit a n-terminal domain
53	<a href="#">d1h41a2</a>	Alignment	not modelled	5.8	19	<b>Fold:</b> Zincin-like <b>Superfamily:</b> beta-N-acetylhexosaminidase-like domain <b>Family:</b> alpha-D-glucuronidase, N-terminal domain
						<b>Fold:</b> Toxins' membrane translocation domains

54	<a href="#">d1ciya3</a>	Alignment	not modelled	5.7	20	<b>Superfamily:</b> delta-Endotoxin (insecticide), N-terminal domain <b>Family:</b> delta-Endotoxin (insecticide), N-terminal domain
55	<a href="#">c2inrA</a>	Alignment	not modelled	5.7	24	<b>PDB header:</b> isomerase <b>Chain:</b> A: <b>PDB Molecule:</b> dna topoisomerase 4 subunit a; <b>PDBTitle:</b> crystal structure of a 59 kda fragment of topoisomerase iv subunit a2 (grla) from staphylococcus aureus
56	<a href="#">d2ba0d2</a>	Alignment	not modelled	5.6	15	<b>Fold:</b> Ribonuclease PH domain 2-like <b>Superfamily:</b> Ribonuclease PH domain 2-like <b>Family:</b> Ribonuclease PH domain 2-like
57	<a href="#">c2c5IT</a>	Alignment	not modelled	5.6	23	<b>PDB header:</b> protein transport <b>Chain:</b> T: <b>PDB Molecule:</b> t-snare affecting a late golgi compartment <b>PDBTitle:</b> n-terminal domain of tlg1 complexed with n-terminus of vps51 in distorted conformation
58	<a href="#">d2b5ua2</a>	Alignment	not modelled	5.5	17	<b>Fold:</b> Cloacin translocation domain <b>Superfamily:</b> Cloacin translocation domain <b>Family:</b> Cloacin translocation domain
59	<a href="#">d1k1xa1</a>	Alignment	not modelled	5.5	11	<b>Fold:</b> immunoglobulin/albumin-binding domain-like <b>Superfamily:</b> Families 57/38 glycoside transferase middle domain <b>Family:</b> 4-alpha-glucanotransferase, domain 2
60	<a href="#">c3ifzA</a>	Alignment	not modelled	5.5	11	<b>PDB header:</b> isomerase <b>Chain:</b> A: <b>PDB Molecule:</b> dna gyrase subunit a; <b>PDBTitle:</b> crystal structure of the first part of the mycobacterium tuberculosis2 dna gyrase reaction core: the breakage and reunion domain at 2.7 a3 resolution
61	<a href="#">d1pv0a</a>	Alignment	not modelled	5.5	22	<b>Fold:</b> Long alpha-hairpin <b>Superfamily:</b> Sporulation inhibitor Sda <b>Family:</b> Sporulation inhibitor Sda
62	<a href="#">d2ia9a1</a>	Alignment	not modelled	5.5	7	<b>Fold:</b> SpoVG-like <b>Superfamily:</b> SpoVG-like <b>Family:</b> SpoVG-like
63	<a href="#">c3d3lB</a>	Alignment	not modelled	5.4	16	<b>PDB header:</b> oxidoreductase <b>Chain:</b> B: <b>PDB Molecule:</b> arachidonate 12-lipoxygenase, 12s-type; <b>PDBTitle:</b> the 2.6 a crystal structure of the lipoxygenase domain of2 human arachidonate 12-lipoxygenase, 12s-type (casp target)
64	<a href="#">c1jy2O</a>	Alignment	not modelled	5.4	14	<b>PDB header:</b> blood clotting <b>Chain:</b> O: <b>PDB Molecule:</b> fibrinogen beta chain; <b>PDBTitle:</b> crystal structure of the central region of bovine2 fibrinogen (e5 fragment) at 1.4 angstroms resolution
65	<a href="#">c1nohB</a>	Alignment	not modelled	5.3	14	<b>PDB header:</b> viral protein <b>Chain:</b> B: <b>PDB Molecule:</b> head morphogenesis protein; <b>PDBTitle:</b> the structure of bacteriophage phi29 scaffolding protein2 gp7 after prohead assembly
66	<a href="#">c2l16A</a>	Alignment	not modelled	5.3	15	<b>PDB header:</b> protein transport <b>Chain:</b> A: <b>PDB Molecule:</b> sec-independent protein translocase protein tatad; <b>PDBTitle:</b> solution structure of bacillus subtilis tatad protein in dpc micelles
67	<a href="#">c2zxrA</a>	Alignment	not modelled	5.3	12	<b>PDB header:</b> hydrolase <b>Chain:</b> A: <b>PDB Molecule:</b> single-stranded dna specific exonuclease recj; <b>PDBTitle:</b> crystal structure of recj in complex with mg2+ from thermus2 thermophilus hb8
68	<a href="#">c2kluA</a>	Alignment	not modelled	5.2	10	<b>PDB header:</b> immune system, membrane protein <b>Chain:</b> A: <b>PDB Molecule:</b> t-cell surface glycoprotein cd4; <b>PDBTitle:</b> nmr structure of the transmembrane and cytoplasmic domains2 of human cd4
69	<a href="#">d1rype</a>	Alignment	not modelled	5.2	15	<b>Fold:</b> Ntn hydrolase-like <b>Superfamily:</b> N-terminal nucleophile aminohydrolases (Ntn hydrolases) <b>Family:</b> Proteasome subunits
70	<a href="#">d1bjta</a>	Alignment	not modelled	5.2	9	<b>Fold:</b> Type II DNA topoisomerase <b>Superfamily:</b> Type II DNA topoisomerase <b>Family:</b> Type II DNA topoisomerase
71	<a href="#">c1bjta</a>	Alignment	not modelled	5.2	9	<b>PDB header:</b> topoisomerase <b>Chain:</b> A: <b>PDB Molecule:</b> topoisomerase ii; <b>PDBTitle:</b> topoisomerase ii residues 409-1201
72	<a href="#">c2yggA</a>	Alignment	not modelled	5.2	25	<b>PDB header:</b> metal binding protein/transport protein <b>Chain:</b> A: <b>PDB Molecule:</b> sodium/hydrogen exchanger 1; <b>PDBTitle:</b> complex of cambr and cam
73	<a href="#">c2q9qC</a>	Alignment	not modelled	5.2	7	<b>PDB header:</b> replication <b>Chain:</b> C: <b>PDB Molecule:</b> dna replication complex gins protein psf1; <b>PDBTitle:</b> the crystal structure of full length human gins complex
74	<a href="#">c3sokB</a>	Alignment	not modelled	5.1	17	<b>PDB header:</b> cell adhesion <b>Chain:</b> B: <b>PDB Molecule:</b> fimbrial protein; <b>PDBTitle:</b> dichelobacter nodosus pilin fima
75	<a href="#">c3s2xB</a>	Alignment	not modelled	5.1	23	<b>PDB header:</b> transferase <b>Chain:</b> B: <b>PDB Molecule:</b> acetyl-coa synthase subunit alpha; <b>PDBTitle:</b> structure of acetyl-coenzyme a synthase alpha subunit c-terminal2 domain
76	<a href="#">d2p0ma1</a>	Alignment	not modelled	5.1	16	<b>Fold:</b> Lipoxigenase <b>Superfamily:</b> Lipoxigenase <b>Family:</b> Animal lipoxigenases
77	<a href="#">d1tsja</a>	Alignment	not modelled	5.1	18	<b>Fold:</b> Glyoxalase/Bleomycin resistance protein/Dihydroxybiphenyl dioxygenase <b>Superfamily:</b> Glyoxalase/Bleomycin resistance protein/Dihydroxybiphenyl dioxygenase <b>Family:</b> 3-demethylubiquinone-9 3-methyltransferase