



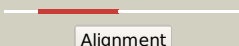
















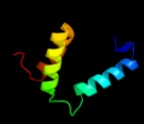


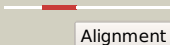
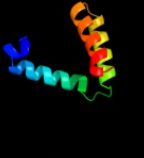
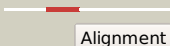
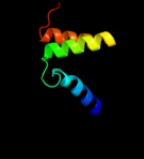




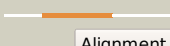

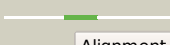
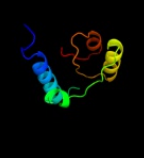
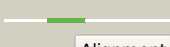



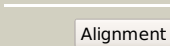
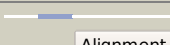
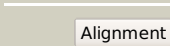

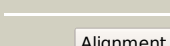




# Phyre2

Email	l.a.kelley@imperial.ac.uk
Description	P58006
Date	Tue Jul 30 13:03:56 BST 2013
Unique Job ID	ec23aefa4f8e1bc7

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	<a href="#">d2pfxa1</a>	 Alignment		99.9	15	<b>Fold:</b> AhpD-like <b>Superfamily:</b> AhpD-like <b>Family:</b> Atu0492-like
2	<a href="#">c3c1B_</a>	 Alignment		99.9	19	<b>PDB header:</b> oxidoreductase <b>Chain:</b> B: <b>PDB Molecule:</b> putative antioxidant defense protein mlr4105; <b>PDBTitle:</b> crystal structure of an antioxidant defense protein (mlr4105) from2 mesorhizobium loti maff303099 at 2.00 a resolution
3	<a href="#">d2oyoa1</a>	 Alignment		99.8	17	<b>Fold:</b> AhpD-like <b>Superfamily:</b> AhpD-like <b>Family:</b> Atu0492-like
4	<a href="#">d2prra1</a>	 Alignment		99.8	17	<b>Fold:</b> AhpD-like <b>Superfamily:</b> AhpD-like <b>Family:</b> Atu0492-like
5	<a href="#">c3lvyB_</a>	 Alignment		99.8	15	<b>PDB header:</b> lyase <b>Chain:</b> B: <b>PDB Molecule:</b> carboxymuconolactone decarboxylase family; <b>PDBTitle:</b> crystal structure of carboxymuconolactone decarboxylase2 family protein smu.961 from streptococcus mutans
6	<a href="#">d2o4da1</a>	 Alignment		99.2	17	<b>Fold:</b> AhpD-like <b>Superfamily:</b> AhpD-like <b>Family:</b> Atu0492-like
7	<a href="#">d2ouwa1</a>	 Alignment		99.0	17	<b>Fold:</b> AhpD-like <b>Superfamily:</b> AhpD-like <b>Family:</b> TTHA0727-like
8	<a href="#">d2gmya1</a>	 Alignment		98.9	18	<b>Fold:</b> AhpD-like <b>Superfamily:</b> AhpD-like <b>Family:</b> Atu0492-like
9	<a href="#">c2qeua</a>	 Alignment		97.8	16	<b>PDB header:</b> lyase <b>Chain:</b> A: <b>PDB Molecule:</b> putative carboxymuconolactone decarboxylase; <b>PDBTitle:</b> crystal structure of putative carboxymuconolactone decarboxylase2 (yp_555818.1) from burkholderia xenovorans lb400 at 1.65 a resolution
10	<a href="#">d2cwqa1</a>	 Alignment		97.6	14	<b>Fold:</b> AhpD-like <b>Superfamily:</b> AhpD-like <b>Family:</b> TTHA0727-like
11	<a href="#">c3beyC_</a>	 Alignment		97.0	17	<b>PDB header:</b> structural genomics, unknown function <b>Chain:</b> C: <b>PDB Molecule:</b> conserved protein o27018; <b>PDBTitle:</b> crystal structure of the protein o27018 from methanobacterium2 thermoautotrophicum. northeast structural genomics consortium target3 tt217

12	<a href="#">c1p8cD_</a>	 Alignment		97.0	14	<b>PDB header:</b> structural genomics, unknown function <b>Chain:</b> D: <b>PDB Molecule:</b> conserved hypothetical protein; <b>PDBTitle:</b> crystal structure of tm1620 (apc4843) from thermotoga2 maritima
13	<a href="#">c3d7iB_</a>	 Alignment		96.4	13	<b>PDB header:</b> lyase <b>Chain:</b> B: <b>PDB Molecule:</b> carboxymuconolactone decarboxylase family protein; <b>PDBTitle:</b> crystal structure of carboxymuconolactone decarboxylase family protein2 possibly involved in oxygen detoxification (1591455) from3 methanococcus jannaschii at 1.75 a resolution
14	<a href="#">d1vkea_</a>	 Alignment		96.1	14	<b>Fold:</b> AhpD-like <b>Superfamily:</b> AhpD-like <b>Family:</b> CMD-like
15	<a href="#">d1vkeb_</a>	 Alignment		95.7	15	<b>Fold:</b> AhpD-like <b>Superfamily:</b> AhpD-like <b>Family:</b> CMD-like
16	<a href="#">d2q0ta1</a>	 Alignment		94.3	15	<b>Fold:</b> AhpD-like <b>Superfamily:</b> AhpD-like <b>Family:</b> AhpD
17	<a href="#">c4g9qA_</a>	 Alignment		81.5	19	<b>PDB header:</b> lyase <b>Chain:</b> A: <b>PDB Molecule:</b> 4-carboxymuconolactone decarboxylase; <b>PDBTitle:</b> crystal structure of a 4-carboxymuconolactone decarboxylase
18	<a href="#">c2r8rB_</a>	 Alignment		58.0	25	<b>PDB header:</b> transferase <b>Chain:</b> B: <b>PDB Molecule:</b> sensor protein; <b>PDBTitle:</b> crystal structure of the n-terminal region (19..243) of sensor protein2 kdpd from pseudomonas syringae pv. tomato str. dc3000
19	<a href="#">d2af7a1</a>	 Alignment		56.9	14	<b>Fold:</b> AhpD-like <b>Superfamily:</b> AhpD-like <b>Family:</b> CMD-like
20	<a href="#">d1knca_</a>	 Alignment		44.9	14	<b>Fold:</b> AhpD-like <b>Superfamily:</b> AhpD-like <b>Family:</b> AhpD
21	<a href="#">c1ckxA_</a>	 Alignment	not modelled	37.4	40	<b>PDB header:</b> metal transport <b>Chain:</b> A: <b>PDB Molecule:</b> cystic fibrosis transmembrane conductance <b>PDBTitle:</b> cystic fibrosis transmembrane conductance regulator:2 solution structures of peptides based on the phe508 region,3 the most common site of disease-causing delta-f508 mutation
22	<a href="#">c2dgaA_</a>	 Alignment	not modelled	27.2	17	<b>PDB header:</b> rna binding protein <b>Chain:</b> A: <b>PDB Molecule:</b> kiaa0430 protein; <b>PDBTitle:</b> solution structure of the rna recognition motif in kiaa04302 protein
23	<a href="#">c3ntsB_</a>	 Alignment	not modelled	20.3	39	<b>PDB header:</b> transferase <b>Chain:</b> B: <b>PDB Molecule:</b> vsdc; <b>PDBTitle:</b> catalytic domain of vsdc from aeromonas hydrophila
24	<a href="#">c1ckwA_</a>	 Alignment	not modelled	18.0	31	<b>PDB header:</b> metal transport <b>Chain:</b> A: <b>PDB Molecule:</b> protein (cystic fibrosis transmembrane <b>PDBTitle:</b> cystic fibrosis transmembrane conductance regulator:2 solution structures of peptides based on the phe508 region,3 the most common site of disease-causing delta-f508 mutation
25	<a href="#">c2ly8A_</a>	 Alignment	not modelled	16.2	19	<b>PDB header:</b> chaperone <b>Chain:</b> A: <b>PDB Molecule:</b> budding yeast chaperone scm3; <b>PDBTitle:</b> the budding yeast chaperone scm3 recognizes the partially unfolded2 dimer of the centromere-specific cse4/h4 histone variant
26	<a href="#">c3c18B_</a>	 Alignment	not modelled	16.2	13	<b>PDB header:</b> transferase <b>Chain:</b> B: <b>PDB Molecule:</b> nucleotidyltransferase-like protein; <b>PDBTitle:</b> crystal structure of nucleotidyltransferase-like protein2 (zp_00538802.1) from exiguobacterium sibiricum 255-15 at 1.90 a3 resolution
27	<a href="#">c2d9gA_</a>	 Alignment	not modelled	15.7	27	<b>PDB header:</b> transcription <b>Chain:</b> A: <b>PDB Molecule:</b> yy1-associated factor 2; <b>PDBTitle:</b> solution structure of the zf-ranbp domain of yy1-associated2 factor 2

28	<a href="#">d1id3b_</a>	Alignment	not modelled	14.3	19	<b>Fold:</b> Histone-fold <b>Superfamily:</b> Histone-fold <b>Family:</b> Nucleosome core histones
29	<a href="#">d1kx5b_</a>	Alignment	not modelled	14.2	17	<b>Fold:</b> Histone-fold <b>Superfamily:</b> Histone-fold <b>Family:</b> Nucleosome core histones
30	<a href="#">d2k3ka1</a>	Alignment	not modelled	13.7	13	<b>Fold:</b> Ferredoxin-like <b>Superfamily:</b> RNA-binding domain, RBD <b>Family:</b> Canonical RBD
31	<a href="#">c2l5aA_</a>	Alignment	not modelled	12.7	18	<b>PDB header:</b> nuclear protein <b>Chain:</b> A: <b>PDB Molecule:</b> histone h3-like centromeric protein cse4, protein scm3, <b>PDBTitle:</b> structural basis for recognition of centromere specific histone h32 variant by nonhistone scm3
32	<a href="#">c3pgwP_</a>	Alignment	not modelled	12.6	15	<b>PDB header:</b> splicing/dna/rna <b>Chain:</b> P: <b>PDB Molecule:</b> u1-a; <b>PDBTitle:</b> crystal structure of human u1 snrnp
33	<a href="#">c2a3jA_</a>	Alignment	not modelled	11.9	17	<b>PDB header:</b> rna binding protein <b>Chain:</b> A: <b>PDB Molecule:</b> u1 small nuclear ribonucleoprotein a; <b>PDBTitle:</b> structure of urndesign, a complete computational redesign2 of human u1a protein
34	<a href="#">c3btpA_</a>	Alignment	not modelled	11.9	35	<b>PDB header:</b> dna binding protein, chaperone <b>Chain:</b> A: <b>PDB Molecule:</b> single-strand dna-binding protein; <b>PDBTitle:</b> crystal structure of agrobacterium tumefaciens vire2 in complex with2 its chaperone vire1: a novel fold and implications for dna binding
35	<a href="#">d1hw8c2</a>	Alignment	not modelled	10.8	24	<b>Fold:</b> Substrate-binding domain of HMG-CoA reductase <b>Superfamily:</b> Substrate-binding domain of HMG-CoA reductase <b>Family:</b> Substrate-binding domain of HMG-CoA reductase
36	<a href="#">c2pehA_</a>	Alignment	not modelled	10.6	15	<b>PDB header:</b> protein binding <b>Chain:</b> A: <b>PDB Molecule:</b> splicing factor 45; <b>PDBTitle:</b> crystal structure of the uhm domain of human spf45 in complex with2 sf3b155-uhl5
37	<a href="#">d1zpya1</a>	Alignment	not modelled	10.3	14	<b>Fold:</b> Ferritin-like <b>Superfamily:</b> Ferritin-like <b>Family:</b> half-ferritin
38	<a href="#">d1rg6a_</a>	Alignment	not modelled	9.7	22	<b>Fold:</b> SAM domain-like <b>Superfamily:</b> SAM/Pointed domain <b>Family:</b> SAM (sterile alpha motif) domain
39	<a href="#">d1zk8a2</a>	Alignment	not modelled	9.0	12	<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
40	<a href="#">c3bjxB_</a>	Alignment	not modelled	8.9	16	<b>PDB header:</b> hydrolase <b>Chain:</b> B: <b>PDB Molecule:</b> halocarboxylic acid dehalogenase dehi; <b>PDBTitle:</b> structure of a group i haloacid dehalogenase from2 pseudomonas putida strain pp3
41	<a href="#">d1lauda_</a>	Alignment	not modelled	8.8	14	<b>Fold:</b> Ferredoxin-like <b>Superfamily:</b> RNA-binding domain, RBD <b>Family:</b> Canonical RBD
42	<a href="#">c1ponB_</a>	Alignment	not modelled	8.5	38	<b>PDB header:</b> calcium-binding protein <b>Chain:</b> B: <b>PDB Molecule:</b> troponin c; <b>PDBTitle:</b> site iii-site iv troponin c heterodimer, nmr
43	<a href="#">d1rz4a1</a>	Alignment	not modelled	8.3	26	<b>Fold:</b> DNA/RNA-binding 3-helical bundle <b>Superfamily:</b> "Winged helix" DNA-binding domain <b>Family:</b> Eukaryotic translation initiation factor 3 subunit 12, eIF3k, C-terminal domain
44	<a href="#">c1zzaA_</a>	Alignment	not modelled	8.1	26	<b>PDB header:</b> membrane protein <b>Chain:</b> A: <b>PDB Molecule:</b> stannin; <b>PDBTitle:</b> solution nmr structure of the membrane protein stannin
45	<a href="#">d1hrti_</a>	Alignment	not modelled	8.0	35	<b>Fold:</b> Knottins (small inhibitors, toxins, lectins) <b>Superfamily:</b> Leech antihemostatic proteins <b>Family:</b> Hirudin-like
46	<a href="#">c3thfA_</a>	Alignment	not modelled	7.7	27	<b>PDB header:</b> actin-binding protein/protein binding <b>Chain:</b> A: <b>PDB Molecule:</b> protein shroom; <b>PDBTitle:</b> crystal structure of the sd2 domain from drosophila shroom
47	<a href="#">d2huec1</a>	Alignment	not modelled	7.4	17	<b>Fold:</b> Histone-fold <b>Superfamily:</b> Histone-fold <b>Family:</b> Nucleosome core histones
48	<a href="#">c3kx6C_</a>	Alignment	not modelled	7.3	35	<b>PDB header:</b> lyase <b>Chain:</b> C: <b>PDB Molecule:</b> fructose-bisphosphate aldolase; <b>PDBTitle:</b> crystal structure of fructose-1,6-bisphosphate aldolase from babesia2 bovis at 2.1a resolution
49	<a href="#">d4htci_</a>	Alignment	not modelled	7.1	35	<b>Fold:</b> Knottins (small inhibitors, toxins, lectins) <b>Superfamily:</b> Leech antihemostatic proteins <b>Family:</b> Hirudin-like
50	<a href="#">c3k1tA_</a>	Alignment	not modelled	7.0	27	<b>PDB header:</b> ligase <b>Chain:</b> A: <b>PDB Molecule:</b> glutamate--cysteine ligase gsha; <b>PDBTitle:</b> crystal structure of putative gamma-glutamylcysteine synthetase2 (yp_546622.1) from methylobacillus flagellatus kt at 1.90 a3 resolution
51	<a href="#">d1wj7a1</a>	Alignment	not modelled	6.9	32	<b>Fold:</b> RuvA C-terminal domain-like <b>Superfamily:</b> UBA-like <b>Family:</b> UBA domain
52	<a href="#">d1nu4a_</a>	Alignment	not modelled	6.5	13	<b>Fold:</b> Ferredoxin-like <b>Superfamily:</b> RNA-binding domain, RBD <b>Family:</b> Canonical RBD
53	<a href="#">c3odnA_</a>	Alignment	not modelled	6.5	15	<b>PDB header:</b> membrane protein <b>Chain:</b> A: <b>PDB Molecule:</b> dally-like protein; <b>PDBTitle:</b> the crystal structure of drosophila dally-like protein core domain <b>PDB header:</b> virus

54	<a href="#">c1bev4_</a>	Alignment	not modelled	6.4	29	<b>Chain:</b> 4: <b>PDB Molecule:</b> bovine enterovirus coat proteins vp1 to vp4; <b>PDBTitle:</b> bovine enterovirus vg-5-27
55	<a href="#">c2eapA_</a>	Alignment	not modelled	6.4	18	<b>PDB header:</b> signaling protein <b>Chain:</b> A: <b>PDB Molecule:</b> lymphocyte cytosolic protein 2; <b>PDBTitle:</b> solution structure of the n-terminal sam-domain of human2 lymphocyte cytosolic protein 2
56	<a href="#">c2qb0D_</a>	Alignment	not modelled	6.4	23	<b>PDB header:</b> hydrolase regulator <b>Chain:</b> D: <b>PDB Molecule:</b> telsam domain - lysozyme chimera; <b>PDBTitle:</b> structure of the 2tel crystallization module fused to t4 lysozyme with2 an ala-gly-pro linker.
57	<a href="#">d1jmx2</a>	Alignment	not modelled	6.2	31	<b>Fold:</b> Cytochrome c <b>Superfamily:</b> Cytochrome c <b>Family:</b> Quinohemoprotein amine dehydrogenase A chain, domains 1 and 2
58	<a href="#">c3ol4B_</a>	Alignment	not modelled	6.2	46	<b>PDB header:</b> unknown function <b>Chain:</b> B: <b>PDB Molecule:</b> putative uncharacterized protein; <b>PDBTitle:</b> crystal structure of a putative uncharacterized protein from2 mycobacterium smegmatis, an ortholog of rv0543c
59	<a href="#">d1jmsa4</a>	Alignment	not modelled	6.2	27	<b>Fold:</b> Nucleotidyltransferase <b>Superfamily:</b> Nucleotidyltransferase <b>Family:</b> DNA polymerase beta-like
60	<a href="#">c1rue4_</a>	Alignment	not modelled	6.0	40	<b>PDB header:</b> virus <b>Chain:</b> 4: <b>PDB Molecule:</b> rhinovirus 14; <b>PDBTitle:</b> rhinovirus 14 site directed mutant n1219a complexed with2 antiviral compound win 52035
61	<a href="#">c3ajfA_</a>	Alignment	not modelled	5.8	25	<b>PDB header:</b> viral protein <b>Chain:</b> A: <b>PDB Molecule:</b> non-structural protein 3; <b>PDBTitle:</b> structural insights into dsrna binding and rna silencing suppression2 by ns3 protein of rice hoja blanca tenuivirus
62	<a href="#">d1iooa_</a>	Alignment	not modelled	5.7	17	<b>Fold:</b> Ribonuclease Rh-like <b>Superfamily:</b> Ribonuclease Rh-like <b>Family:</b> Ribonuclease Rh-like
63	<a href="#">d1sxja1</a>	Alignment	not modelled	5.7	31	<b>Fold:</b> post-AAA+ oligomerization domain-like <b>Superfamily:</b> post-AAA+ oligomerization domain-like <b>Family:</b> DNA polymerase III clamp loader subunits, C-terminal domain
64	<a href="#">d1ussa_</a>	Alignment	not modelled	5.5	14	<b>Fold:</b> DNA/RNA-binding 3-helical bundle <b>Superfamily:</b> "Winged helix" DNA-binding domain <b>Family:</b> Linker histone H1/H5
65	<a href="#">d2vana2</a>	Alignment	not modelled	5.4	9	<b>Fold:</b> Nucleotidyltransferase <b>Superfamily:</b> Nucleotidyltransferase <b>Family:</b> DNA polymerase beta-like
66	<a href="#">c2krca_</a>	Alignment	not modelled	5.2	25	<b>PDB header:</b> transcription <b>Chain:</b> A: <b>PDB Molecule:</b> dna-directed rna polymerase subunit delta; <b>PDBTitle:</b> solution structure of the n-terminal domain of bacillus2 subtilis delta subunit of rna polymerase
67	<a href="#">c3i3nA_</a>	Alignment	not modelled	5.1	19	<b>PDB header:</b> protein binding <b>Chain:</b> A: <b>PDB Molecule:</b> kelch-like protein 11; <b>PDBTitle:</b> crystal structure of the btb-back domains of human klh11
68	<a href="#">c1hwjB_</a>	Alignment	not modelled	5.1	24	<b>PDB header:</b> oxidoreductase <b>Chain:</b> B: <b>PDB Molecule:</b> hmg-coa reductase; <b>PDBTitle:</b> complex of the catalytic portion of human hmg-coa reductase2 with cerivastatin