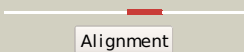

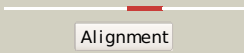

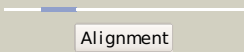
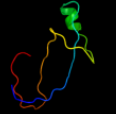
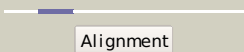
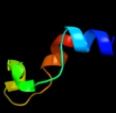
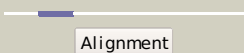

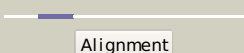





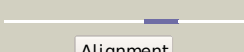

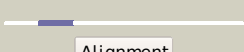

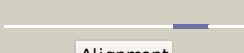






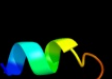

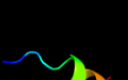



# Phyre2

Email	I.a.kelley@imperial.ac.uk
Description	P39336
Date	Thu Jan 5 11:59:27 GMT 2012
Unique Job ID	f4d7d81ed7f3e669

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	<a href="#">c2qzaA_</a>	 Alignment		95.3	27	<b>PDB header:</b> ligase <b>Chain:</b> A: <b>PDB Molecule:</b> secreted effector protein; <b>PDBTitle:</b> crystal structure of salmonella effector protein sopa
2	<a href="#">c3nb2B_</a>	 Alignment		94.6	31	<b>PDB header:</b> ligase <b>Chain:</b> B: <b>PDB Molecule:</b> secreted effector protein; <b>PDBTitle:</b> crystal structure of e. coli o157:h7 effector protein nlel
3	<a href="#">d1qcsa2</a>	 Alignment		24.9	21	<b>Fold:</b> Cdc48 domain 2-like <b>Superfamily:</b> Cdc48 domain 2-like <b>Family:</b> Cdc48 domain 2-like
4	<a href="#">d1vmja_</a>	 Alignment		19.3	24	<b>Fold:</b> YjbQ-like <b>Superfamily:</b> YjbQ-like <b>Family:</b> YjbQ-like
5	<a href="#">c1ve0A_</a>	 Alignment		18.3	29	<b>PDB header:</b> metal binding protein <b>Chain:</b> A: <b>PDB Molecule:</b> hypothetical protein (st2072); <b>PDBTitle:</b> crystal structure of uncharacterized protein st2072 from sulfolobus2 tokodaii
6	<a href="#">d1vpfa_</a>	 Alignment		18.0	24	<b>Fold:</b> YjbQ-like <b>Superfamily:</b> YjbQ-like <b>Family:</b> YjbQ-like
7	<a href="#">c2w8dB_</a>	 Alignment		17.4	17	<b>PDB header:</b> transferase <b>Chain:</b> B: <b>PDB Molecule:</b> processed glycerol phosphate lipoteichoic acid synthase 2; <b>PDBTitle:</b> distinct and essential morphogenic functions for wall- and2 lipo-teichoic acids in bacillus subtilis
8	<a href="#">c3ik5A_</a>	 Alignment		16.9	33	<b>PDB header:</b> viral protein/signaling protein <b>Chain:</b> A: <b>PDB Molecule:</b> protein nef; <b>PDBTitle:</b> simvac239 nef in complex with tcr zeta itam 1 polypeptide2 (a63-r80)
9	<a href="#">d1s4ka_</a>	 Alignment		16.6	24	<b>Fold:</b> lambda repressor-like DNA-binding domains <b>Superfamily:</b> lambda repressor-like DNA-binding domains <b>Family:</b> YdiL-like
10	<a href="#">c2p6cB_</a>	 Alignment		15.9	28	<b>PDB header:</b> structural genomics, unknown function <b>Chain:</b> B: <b>PDB Molecule:</b> aq_2013 protein; <b>PDBTitle:</b> crystal structure of hypothetical protein aq_2013 from aquifex2 aeolicus vf5.
11	<a href="#">d2py5a1</a>	 Alignment		14.9	33	<b>Fold:</b> Ribonuclease H-like motif <b>Superfamily:</b> Ribonuclease H-like <b>Family:</b> DnaQ-like 3'-5' exonuclease

12	<a href="#">c2jynA_</a>	Alignment		14.2	36	<b>PDB header:</b> structural genomics, unknown function <b>Chain:</b> A: <b>PDB Molecule:</b> upf0368 protein ypl225w; <b>PDBTitle:</b> a novel solution nmr structure of protein yst0336 from2 saccharomyces cerevisiae. northeast structural genomics3 consortium target yt51/ontario centre for structural4 proteomics target yst0336
13	<a href="#">c2xi1A_</a>	Alignment		14.2	39	<b>PDB header:</b> viral protein <b>Chain:</b> A: <b>PDB Molecule:</b> nef; <b>PDBTitle:</b> crystal structure of the hiv-1 nef sequenced from a patient's sample
14	<a href="#">d1efnb_</a>	Alignment		13.4	33	<b>Fold:</b> Regulatory factor Nef <b>Superfamily:</b> Regulatory factor Nef <b>Family:</b> Regulatory factor Nef
15	<a href="#">c3rbba_</a>	Alignment		12.4	39	<b>PDB header:</b> viral protein, protein binding <b>Chain:</b> A: <b>PDB Molecule:</b> protein nef; <b>PDBTitle:</b> hiv-1 nef protein in complex with engineered hck sh3 domain
16	<a href="#">d2nefa_</a>	Alignment		12.1	33	<b>Fold:</b> Regulatory factor Nef <b>Superfamily:</b> Regulatory factor Nef <b>Family:</b> Regulatory factor Nef
17	<a href="#">c3ebcA_</a>	Alignment		11.9	62	<b>PDB header:</b> hydrolase/dna <b>Chain:</b> A: <b>PDB Molecule:</b> type-2 restriction enzyme hincii; <b>PDBTitle:</b> structure of n141a hincii with cognate dna
18	<a href="#">d1bf4a_</a>	Alignment		11.8	42	<b>Fold:</b> SH3-like barrel <b>Superfamily:</b> Chromo domain-like <b>Family:</b> "Histone-like" proteins from archaea
19	<a href="#">c1p82A_</a>	Alignment		11.6	62	<b>PDB header:</b> chaperone <b>Chain:</b> A: <b>PDB Molecule:</b> 10 kda chaperonin; <b>PDBTitle:</b> nmr structure of 1-25 fragment of mycobacterium2 tuberculosis cpn10
20	<a href="#">d2pgca1</a>	Alignment		11.5	56	<b>Fold:</b> Ferredoxin-like <b>Superfamily:</b> Dimeric alpha+beta barrel <b>Family:</b> Marine metagenome family DABB3
21	<a href="#">d1tx3a1</a>	Alignment	not modelled	11.3	62	<b>Fold:</b> Restriction endonuclease-like <b>Superfamily:</b> Restriction endonuclease-like <b>Family:</b> Restriction endonuclease HincII
22	<a href="#">d1vj0a1</a>	Alignment	not modelled	10.9	20	<b>Fold:</b> GroES-like <b>Superfamily:</b> GroES-like <b>Family:</b> Alcohol dehydrogenase-like, N-terminal domain
23	<a href="#">c2xrhA_</a>	Alignment	not modelled	10.8	32	<b>PDB header:</b> unknown function <b>Chain:</b> A: <b>PDB Molecule:</b> protein hp0721; <b>PDBTitle:</b> crystal structure of the truncated form of hp0721
24	<a href="#">c2elpA_</a>	Alignment	not modelled	9.0	55	<b>PDB header:</b> transcription <b>Chain:</b> A: <b>PDB Molecule:</b> zinc finger protein 406; <b>PDBTitle:</b> solution structure of the 13th c2h2 zinc finger of human2 zinc finger protein 406
25	<a href="#">d1alga_</a>	Alignment	not modelled	8.9	22	<b>Fold:</b> beta-lactamase/transpeptidase-like <b>Superfamily:</b> beta-lactamase/transpeptidase-like <b>Family:</b> beta-Lactamase/D-ala carboxypeptidase
26	<a href="#">d1ug7a_</a>	Alignment	not modelled	8.6	20	<b>Fold:</b> Four-helical up-and-down bundle <b>Superfamily:</b> Domain from hypothetical 2610208m17rik protein <b>Family:</b> Domain from hypothetical 2610208m17rik protein
27	<a href="#">c2qyxB_</a>	Alignment	not modelled	8.3	31	<b>PDB header:</b> structural genomics, unknown function <b>Chain:</b> B: <b>PDB Molecule:</b> uncharacterized protein mj0159; <b>PDBTitle:</b> crystal structure of uncharacterized protein mj0159 from2 methanocaldococcus jannaschii
28	<a href="#">c2jvfA_</a>	Alignment	not modelled	8.1	32	<b>PDB header:</b> de novo protein <b>Chain:</b> A: <b>PDB Molecule:</b> de novo protein m7; <b>PDBTitle:</b> solution structure of m7, a computationally-designed2 artificial protein
29	<a href="#">c1evsA_</a>	Alignment	not modelled	7.9	29	<b>PDB header:</b> de novo protein <b>Chain:</b> A: <b>PDB Molecule:</b> top7;

29	<a href="#">c1qysA</a>	Alignment	not modelled	7.9	29	<b>PDBTitle:</b> crystal structure of top7: a computationally designed2 protein with a novel fold <b>PDB header:</b> ligase
30	<a href="#">c2ejsA</a>	Alignment	not modelled	7.9	17	<b>Chain:</b> A: <b>PDB Molecule:</b> autocrine motility factor receptor, isoform 2; <b>PDBTitle:</b> solution structure of ruh-076, a human cue domain
31	<a href="#">d1y14a</a>	Alignment	not modelled	7.8	12	<b>Fold:</b> SAM domain-like <b>Superfamily:</b> HRDC-like <b>Family:</b> RNA polymerase II subunit RBP4 (RpoF)
32	<a href="#">c2r8rB</a>	Alignment	not modelled	7.7	26	<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
33	<a href="#">c3lgeG</a>	Alignment	not modelled	7.3	47	<b>PDB header:</b> lyase/protein binding <b>Chain:</b> G: <b>PDB Molecule:</b> sorting nexin-9; <b>PDBTitle:</b> crystal structure of rabbit muscle aldolase-snx9 lc4 complex
34	<a href="#">c3lgeF</a>	Alignment	not modelled	7.3	47	<b>PDB header:</b> lyase/protein binding <b>Chain:</b> F: <b>PDB Molecule:</b> sorting nexin-9; <b>PDBTitle:</b> crystal structure of rabbit muscle aldolase-snx9 lc4 complex
35	<a href="#">c3h0gP</a>	Alignment	not modelled	6.9	21	<b>PDB header:</b> transcription <b>Chain:</b> P: <b>PDB Molecule:</b> dna-directed rna polymerase ii subunit rpb4; <b>PDBTitle:</b> rna polymerase ii from schizosaccharomyces pombe
36	<a href="#">c3l76B</a>	Alignment	not modelled	6.7	42	<b>PDB header:</b> transferase <b>Chain:</b> B: <b>PDB Molecule:</b> aspartokinase; <b>PDBTitle:</b> crystal structure of aspartate kinase from synechocystis
37	<a href="#">c1qdnA</a>	Alignment	not modelled	6.6	21	<b>PDB header:</b> fusion protein <b>Chain:</b> A: <b>PDB Molecule:</b> protein (n-ethylmaleimide sensitive fusion <b>PDBTitle:</b> amino terminal domain of the n-ethylmaleimide sensitive2 fusion protein (nsf)
38	<a href="#">c2klqA</a>	Alignment	not modelled	6.5	29	<b>PDB header:</b> replication <b>Chain:</b> A: <b>PDB Molecule:</b> dna replication licensing factor mcm6; <b>PDBTitle:</b> the solution structure of cbd of human mcm6
39	<a href="#">d1vmfa</a>	Alignment	not modelled	6.1	23	<b>Fold:</b> YjbQ-like <b>Superfamily:</b> YjbQ-like <b>Family:</b> YjbQ-like
40	<a href="#">d2qrdb1</a>	Alignment	not modelled	6.0	44	<b>Fold:</b> AMPKBI-like <b>Superfamily:</b> AMPKBI-like <b>Family:</b> AMPKBI-like
41	<a href="#">d1p2fa1</a>	Alignment	not modelled	5.9	16	<b>Fold:</b> DNA/RNA-binding 3-helical bundle <b>Superfamily:</b> C-terminal effector domain of the bipartite response regulators <b>Family:</b> PhoB-like
42	<a href="#">c3fo8D</a>	Alignment	not modelled	5.9	43	<b>PDB header:</b> viral protein <b>Chain:</b> D: <b>PDB Molecule:</b> tail sheath protein gp18; <b>PDBTitle:</b> crystal structure of the bacteriophage t4 tail sheath2 protein, protease resistant fragment gp18pr
43	<a href="#">c2ex3l</a>	Alignment	not modelled	5.9	33	<b>PDB header:</b> transferase/replication <b>Chain:</b> I: <b>PDB Molecule:</b> dna polymerase; <b>PDBTitle:</b> bacteriophage phi29 dna polymerase bound to terminal protein
44	<a href="#">c2wzpR</a>	Alignment	not modelled	5.8	28	<b>PDB header:</b> viral protein <b>Chain:</b> R: <b>PDB Molecule:</b> lactococcal phage p2 orf16; <b>PDBTitle:</b> structures of lactococcal phage p2 baseplate shed light on2 a novel mechanism of host attachment and activation in3 siphoviridae
45	<a href="#">c3gpkA</a>	Alignment	not modelled	5.8	12	<b>PDB header:</b> isomerase <b>Chain:</b> A: <b>PDB Molecule:</b> ppic-type peptidyl-prolyl cis-trans isomerase; <b>PDBTitle:</b> crystal structure of ppic-type peptidyl-prolyl cis-trans isomerase2 domain at 1.55a resolution.
46	<a href="#">c2k0mA</a>	Alignment	not modelled	5.7	20	<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 the uncharacterized protein from2 rhodospirillum rubrum gene locus rru_a0810. northeast3 structural genomics target rrr43
47	<a href="#">d1gado1</a>	Alignment	not modelled	5.6	58	<b>Fold:</b> NAD(P)-binding Rossmann-fold domains <b>Superfamily:</b> NAD(P)-binding Rossmann-fold domains <b>Family:</b> Glyceraldehyde-3-phosphate dehydrogenase-like, N-terminal domain
48	<a href="#">d1ggaa1</a>	Alignment	not modelled	5.6	58	<b>Fold:</b> NAD(P)-binding Rossmann-fold domains <b>Superfamily:</b> NAD(P)-binding Rossmann-fold domains <b>Family:</b> Glyceraldehyde-3-phosphate dehydrogenase-like, N-terminal domain
49	<a href="#">d2qlvb2</a>	Alignment	not modelled	5.5	44	<b>Fold:</b> AMPKBI-like <b>Superfamily:</b> AMPKBI-like <b>Family:</b> AMPKBI-like
50	<a href="#">d2nn4a1</a>	Alignment	not modelled	5.4	37	<b>Fold:</b> YqqQ-like <b>Superfamily:</b> YqqQ-like <b>Family:</b> YqqQ-like
51	<a href="#">c3jszA</a>	Alignment	not modelled	5.4	35	<b>PDB header:</b> transferase <b>Chain:</b> A: <b>PDB Molecule:</b> putative uncharacterized protein; <b>PDBTitle:</b> legionella pneumophila glucosyltransferase lgt1 n293a with udp-glc
52	<a href="#">d2v8qb1</a>	Alignment	not modelled	5.3	44	<b>Fold:</b> AMPKBI-like <b>Superfamily:</b> AMPKBI-like <b>Family:</b> AMPKBI-like
53	<a href="#">c2qdjA</a>	Alignment	not modelled	5.2	11	<b>PDB header:</b> antitumor protein <b>Chain:</b> A: <b>PDB Molecule:</b> retinoblastoma-associated protein; <b>PDBTitle:</b> crystal structure of the retinoblastoma protein n-domain2 provides insight into tumor suppression, ligand3 interaction and holoprotein architecture
						<b>PDB header:</b> protein binding

54	<a href="#">c2cp8A_</a>	Alignment	not modelled	5.2	31	<b>Chain:</b> A: <b>PDB Molecule:</b> next to brca1 gene 1 protein; <b>PDBTitle:</b> solution structure of the rsgi ruh-046, a uba domain from2 human next to brca1 gene 1 protein (kiaa0049 protein)3 r923h variant
55	<a href="#">c2cu5C_</a>	Alignment	not modelled	5.2	27	<b>PDB header:</b> structural genomics, unknown function <b>Chain:</b> C: <b>PDB Molecule:</b> conserved hypothetical protein tt1486; <b>PDBTitle:</b> crystal structure of the conserved hypothetical protein tt1486 from2 thermus thermophilus hb8
56	<a href="#">c1zk6A_</a>	Alignment	not modelled	5.1	38	<b>PDB header:</b> isomerase <b>Chain:</b> A: <b>PDB Molecule:</b> foldase protein prsa; <b>PDBTitle:</b> nmr solution structure of b. subtilis prsa ppiase