




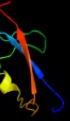





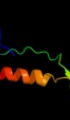



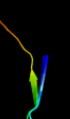






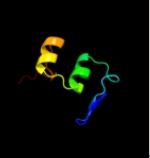
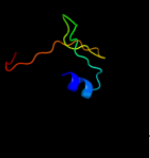
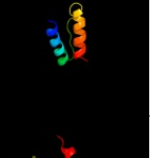
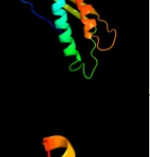

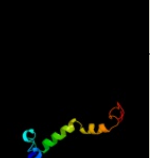

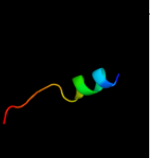
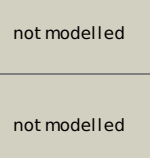


# Phyre2

Email	I.a.kelley@imperial.ac.uk
Description	P52127
Date	Thu Jan 5 12:05:31 GMT 2012
Unique Job ID	16360cac2af7ba32

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	<a href="#">d2j7ja2</a>	 Alignment		40.3	36	<b>Fold:</b> beta-beta-alpha zinc fingers <b>Superfamily:</b> beta-beta-alpha zinc fingers <b>Family:</b> Classic zinc finger, C2H2
2	<a href="#">d2c1ha1</a>	 Alignment		39.9	25	<b>Fold:</b> TIM beta/alpha-barrel <b>Superfamily:</b> Aldolase <b>Family:</b> 5-aminolaevulinate dehydratase, ALAD (porphobilinogen synthase)
3	<a href="#">d1l6sa_</a>	 Alignment		35.9	19	<b>Fold:</b> TIM beta/alpha-barrel <b>Superfamily:</b> Aldolase <b>Family:</b> 5-aminolaevulinate dehydratase, ALAD (porphobilinogen synthase)
4	<a href="#">d1wgwa_</a>	 Alignment		23.7	18	<b>Fold:</b> Four-helical up-and-down bundle <b>Superfamily:</b> Domain of the SRP/SRP receptor G-proteins <b>Family:</b> Domain of the SRP/SRP receptor G-proteins
5	<a href="#">d1x6va2</a>	 Alignment		22.7	21	<b>Fold:</b> Adenine nucleotide alpha hydrolase-like <b>Superfamily:</b> Nucleotidyl transferase <b>Family:</b> ATP sulfurylase catalytic domain
6	<a href="#">c1e1hC_</a>	 Alignment		21.1	13	<b>PDB header:</b> hydrolase <b>Chain:</b> C: <b>PDB Molecule:</b> botulinum neurotoxin type a light chain; <b>PDBTitle:</b> crystal structure of recombinant botulinum neurotoxin type2 a light chain, self-inhibiting zn endopeptidase.
7	<a href="#">d1jhda2</a>	 Alignment		19.0	36	<b>Fold:</b> Adenine nucleotide alpha hydrolase-like <b>Superfamily:</b> Nucleotidyl transferase <b>Family:</b> ATP sulfurylase catalytic domain
8	<a href="#">d1gefa_</a>	 Alignment		18.7	23	<b>Fold:</b> Restriction endonuclease-like <b>Superfamily:</b> Restriction endonuclease-like <b>Family:</b> Hjc-like
9	<a href="#">c2py8B_</a>	 Alignment		18.7	21	<b>PDB header:</b> chaperone <b>Chain:</b> B: <b>PDB Molecule:</b> hypothetical protein rbcx; <b>PDBTitle:</b> rbcx
10	<a href="#">c2peoA_</a>	 Alignment		16.9	16	<b>PDB header:</b> chaperone <b>Chain:</b> A: <b>PDB Molecule:</b> rbcx protein; <b>PDBTitle:</b> crystal structure of rbcx from anabaena ca
11	<a href="#">d2peoa1</a>	 Alignment		16.9	16	<b>Fold:</b> RbcX-like <b>Superfamily:</b> RbcX-like <b>Family:</b> RbcX-like

12	<a href="#">c3gk7A_</a>	Alignment		16.4	18	<b>PDB header:</b> transferase <b>Chain:</b> A: <b>PDB Molecule:</b> 4-hydroxybutyrate coa-transferase; <b>PDBTitle:</b> crystal structure of 4-hydroxybutyrate coa-transferase from2 clostridium aminobutyricum
13	<a href="#">dlob8a_</a>	Alignment		15.8	22	<b>Fold:</b> Restriction endonuclease-like <b>Superfamily:</b> Restriction endonuclease-like <b>Family:</b> Hjc-like
14	<a href="#">c2pt7G_</a>	Alignment		14.4	10	<b>PDB header:</b> hydrolase/protein binding <b>Chain:</b> G: <b>PDB Molecule:</b> hypothetical protein; <b>PDBTitle:</b> crystal structure of cag virb11 (hp0525) and an inhibitory protein2 (hp1451)
15	<a href="#">d1jiha1</a>	Alignment		14.1	17	<b>Fold:</b> Lesion bypass DNA polymerase (Y-family), little finger domain <b>Superfamily:</b> Lesion bypass DNA polymerase (Y-family), little finger domain <b>Family:</b> Lesion bypass DNA polymerase (Y-family), little finger domain
16	<a href="#">c2qjfB_</a>	Alignment		13.8	21	<b>PDB header:</b> transferase <b>Chain:</b> B: <b>PDB Molecule:</b> bifunctional 3'-phosphoadenosine 5'- <b>PDBTitle:</b> crystal structure of atp-sulfurylase domain of human paps2 synthetase 1
17	<a href="#">d1v47a2</a>	Alignment		13.5	21	<b>Fold:</b> Adenine nucleotide alpha hydrolase-like <b>Superfamily:</b> Nucleotidylyl transferase <b>Family:</b> ATP sulfurylase catalytic domain
18	<a href="#">d1c4ka3</a>	Alignment		13.1	18	<b>Fold:</b> Ornithine decarboxylase C-terminal domain <b>Superfamily:</b> Ornithine decarboxylase C-terminal domain <b>Family:</b> Ornithine decarboxylase C-terminal domain
19	<a href="#">d1gzga_</a>	Alignment		13.1	24	<b>Fold:</b> TIM beta/alpha-barrel <b>Superfamily:</b> Aldolase <b>Family:</b> 5-aminolaevulinate dehydratase, ALAD (porphobilinogen synthase)
20	<a href="#">d1vzva_</a>	Alignment		12.9	24	<b>Fold:</b> Herpes virus serine proteinase, assemblin <b>Superfamily:</b> Herpes virus serine proteinase, assemblin <b>Family:</b> Herpes virus serine proteinase, assemblin
21	<a href="#">c1xnjB_</a>	Alignment	not modelled	12.5	21	<b>PDB header:</b> transferase <b>Chain:</b> B: <b>PDB Molecule:</b> bifunctional 3'-phosphoadenosine 5'- <b>PDBTitle:</b> phosphosulfate <b>PDB header:</b> aps complex of human paps synthetase 1
22	<a href="#">c2kmgA_</a>	Alignment	not modelled	12.2	23	<b>PDB header:</b> gene regulation <b>Chain:</b> A: <b>PDB Molecule:</b> klca; <b>PDBTitle:</b> the structure of the klca and ardb proteins show a novel2 fold and antirestriction activity against type i dna3 restriction systems in vivo but not in vitro
23	<a href="#">c1jhdA_</a>	Alignment	not modelled	12.0	36	<b>PDB header:</b> transferase <b>Chain:</b> A: <b>PDB Molecule:</b> sulfate adenyllyltransferase; <b>PDBTitle:</b> crystal structure of bacterial atp sulfurylase from the2 riftia pachyptila symbiont
24	<a href="#">d1k8ke_</a>	Alignment	not modelled	11.8	17	<b>Fold:</b> Arp2/3 complex 21 kDa subunit ARPC3 <b>Superfamily:</b> Arp2/3 complex 21 kDa subunit ARPC3 <b>Family:</b> Arp2/3 complex 21 kDa subunit ARPC3
25	<a href="#">c3ulxA_</a>	Alignment	not modelled	11.7	40	<b>PDB header:</b> dna binding protein <b>Chain:</b> A: <b>PDB Molecule:</b> stress-induced transcription factor nac1; <b>PDBTitle:</b> crystal structural of the conserved domain of rice stress-responsive2 nac1
26	<a href="#">d1wiia_</a>	Alignment	not modelled	11.7	67	<b>Fold:</b> Rubredoxin-like <b>Superfamily:</b> Zinc beta-ribbon <b>Family:</b> Putative zinc binding domain
27	<a href="#">d1j8yf1</a>	Alignment	not modelled	11.5	15	<b>Fold:</b> Four-helical up-and-down bundle <b>Superfamily:</b> Domain of the SRP/SRP receptor G-proteins <b>Family:</b> Domain of the SRP/SRP receptor G-proteins
28	<a href="#">d2qlra2</a>	Alignment	not modelled	11.0	23	<b>Fold:</b> PEP carboxykinase N-terminal domain <b>Superfamily:</b> PEP carboxykinase N-terminal domain <b>Family:</b> PEP carboxykinase N-terminal domain

29	<a href="#">dl1s1a1</a>	Alignment	not modelled	10.3	13	<b>Fold:</b> Four-helical up-and-down bundle <b>Superfamily:</b> Domain of the SRP/SRP receptor G-proteins <b>Family:</b> Domain of the SRP/SRP receptor G-proteins
30	<a href="#">dlqzxa1</a>	Alignment	not modelled	10.3	15	<b>Fold:</b> Four-helical up-and-down bundle <b>Superfamily:</b> Domain of the SRP/SRP receptor G-proteins <b>Family:</b> Domain of the SRP/SRP receptor G-proteins
31	<a href="#">dlm8pa2</a>	Alignment	not modelled	10.1	36	<b>Fold:</b> Adenine nucleotide alpha hydrolase-like <b>Superfamily:</b> Nucleotidylyl transferase <b>Family:</b> ATP sulfurylase catalytic domain
32	<a href="#">c2gvf_</a>	Alignment	not modelled	10.0	10	<b>PDB header:</b> structural genomics, unknown function <b>Chain:</b> F: <b>PDB Molecule:</b> putative cytoplasmic protein; <b>PDBTitle:</b> crystal structure of a protein of unknown function from salmonella2 typhimurium
33	<a href="#">c3ka1A_</a>	Alignment	not modelled	10.0	18	<b>PDB header:</b> chaperone <b>Chain:</b> A: <b>PDB Molecule:</b> rbcx protein; <b>PDBTitle:</b> crystal structure of rbxc from thermosynechococcus elongatus
34	<a href="#">c1v47B_</a>	Alignment	not modelled	9.9	21	<b>PDB header:</b> transferase <b>Chain:</b> B: <b>PDB Molecule:</b> atp sulfurylase; <b>PDBTitle:</b> crystal structure of atp sulfurylase from thermus2 thermophilus hb8 in complex with aps
35	<a href="#">d2gvja1</a>	Alignment	not modelled	9.8	10	<b>Fold:</b> Phage tail protein-like <b>Superfamily:</b> Phage tail protein-like <b>Family:</b> STM4215-like
36	<a href="#">dlj3ba2</a>	Alignment	not modelled	9.8	26	<b>Fold:</b> PEP carboxykinase N-terminal domain <b>Superfamily:</b> PEP carboxykinase N-terminal domain <b>Family:</b> PEP carboxykinase N-terminal domain
37	<a href="#">c2wj0B_</a>	Alignment	not modelled	9.7	15	<b>PDB header:</b> hydrolase/dna <b>Chain:</b> B: <b>PDB Molecule:</b> archaeal hjc; <b>PDBTitle:</b> crystal structures of holliday junction resolvases from2 archaeoglobus fulgidus bound to dna substrate
38	<a href="#">dlq8fa2</a>	Alignment	not modelled	9.3	29	<b>Fold:</b> Adenine nucleotide alpha hydrolase-like <b>Superfamily:</b> Nucleotidylyl transferase <b>Family:</b> ATP sulfurylase catalytic domain
39	<a href="#">dlna6a2</a>	Alignment	not modelled	9.0	22	<b>Fold:</b> Restriction endonuclease-like <b>Superfamily:</b> Restriction endonuclease-like <b>Family:</b> Type II restriction endonuclease catalytic domain
40	<a href="#">dlat3a_</a>	Alignment	not modelled	8.7	21	<b>Fold:</b> Herpes virus serine proteinase, assemblin <b>Superfamily:</b> Herpes virus serine proteinase, assemblin <b>Family:</b> Herpes virus serine proteinase, assemblin
41	<a href="#">c2o9xA_</a>	Alignment	not modelled	8.6	15	<b>PDB header:</b> structural genomics, unknown function <b>Chain:</b> A: <b>PDB Molecule:</b> reductase, assembly protein; <b>PDBTitle:</b> crystal structure of a putative redox enzyme maturation protein from2 archaeoglobus fulgidus
42	<a href="#">c1r6xA_</a>	Alignment	not modelled	8.5	29	<b>PDB header:</b> transferase <b>Chain:</b> A: <b>PDB Molecule:</b> atp:sulfate adenyllyltransferase; <b>PDBTitle:</b> the crystal structure of a truncated form of yeast atp2 sulfurylase, lacking the c-terminal aps kinase-like domain,3 in complex with sulfate
43	<a href="#">dljq6a_</a>	Alignment	not modelled	8.3	6	<b>Fold:</b> Herpes virus serine proteinase, assemblin <b>Superfamily:</b> Herpes virus serine proteinase, assemblin <b>Family:</b> Herpes virus serine proteinase, assemblin
44	<a href="#">d2gtad1</a>	Alignment	not modelled	8.1	20	<b>Fold:</b> all-alpha NTP pyrophosphatases <b>Superfamily:</b> all-alpha NTP pyrophosphatases <b>Family:</b> MazG-like
45	<a href="#">dljixa_</a>	Alignment	not modelled	7.7	16	<b>Fold:</b> UDP-Glycosyltransferase/glycogen phosphorylase <b>Superfamily:</b> UDP-Glycosyltransferase/glycogen phosphorylase <b>Family:</b> beta-Glycosyltransferase (DNA-modifying)
46	<a href="#">c1g8gB_</a>	Alignment	not modelled	7.6	29	<b>PDB header:</b> transferase <b>Chain:</b> B: <b>PDB Molecule:</b> sulfate adenyllyltransferase; <b>PDBTitle:</b> atp sulfurylase from s. cerevisiae: the binary product complex with2 aps
47	<a href="#">dlsnna_</a>	Alignment	not modelled	7.5	19	<b>Fold:</b> YrdC/RibB <b>Superfamily:</b> YrdC/RibB <b>Family:</b> 3,4-dihydroxy-2-butanone 4-phosphate synthase, DHBP synthase, RibB
48	<a href="#">d2ipqx1</a>	Alignment	not modelled	7.0	9	<b>Fold:</b> DNA/RNA-binding 3-helical bundle <b>Superfamily:</b> "Winged helix" DNA-binding domain <b>Family:</b> STY4665 C-terminal domain-like
49	<a href="#">dlkn6a_</a>	Alignment	not modelled	6.9	22	<b>Fold:</b> Ferredoxin-like <b>Superfamily:</b> Protease propeptides/inhibitors <b>Family:</b> Prohormone convertase 1 pro-domain
50	<a href="#">d2pbka1</a>	Alignment	not modelled	6.8	18	<b>Fold:</b> Herpes virus serine proteinase, assemblin <b>Superfamily:</b> Herpes virus serine proteinase, assemblin <b>Family:</b> Herpes virus serine proteinase, assemblin
51	<a href="#">dlafpa_</a>	Alignment	not modelled	6.5	28	<b>Fold:</b> Antifungal protein (AGAFP) <b>Superfamily:</b> Antifungal protein (AGAFP) <b>Family:</b> Antifungal protein (AGAFP)
52	<a href="#">dlxg8a_</a>	Alignment	not modelled	6.5	14	<b>Fold:</b> Thioredoxin fold <b>Superfamily:</b> Thioredoxin-like <b>Family:</b> YuzD-like
53	<a href="#">dlztpa1</a>	Alignment	not modelled	6.4	12	<b>Fold:</b> eIF4e-like <b>Superfamily:</b> eIF4e-like <b>Family:</b> BLES03-like
54	<a href="#">dliega_</a>	Alignment	not modelled	6.3	6	<b>Fold:</b> Herpes virus serine proteinase, assemblin <b>Superfamily:</b> Herpes virus serine proteinase, assemblin <b>Family:</b> Herpes virus serine proteinase, assemblin
55	<a href="#">d2p41a1</a>	Alignment	not modelled	6.2	17	<b>Fold:</b> S-adenosyl-L-methionine-dependent methyltransferases <b>Superfamily:</b> S-adenosyl-L-methionine-dependent methyltransferases <b>Family:</b> mRNA cap methylase

56	<a href="#">dlahsa_</a>	Alignment	not modelled	6.2	20	<b>Fold:</b> Viral protein domain <b>Superfamily:</b> Viral protein domain <b>Family:</b> Top domain of virus capsid protein
57	<a href="#">dlo6ea_</a>	Alignment	not modelled	5.9	18	<b>Fold:</b> Herpes virus serine proteinase, assemblin <b>Superfamily:</b> Herpes virus serine proteinase, assemblin <b>Family:</b> Herpes virus serine proteinase, assemblin
58	<a href="#">c1p4qA_</a>	Alignment	not modelled	5.8	44	<b>PDB header:</b> transcription/transferase <b>Chain:</b> A: <b>PDB Molecule:</b> cbp/p300-interacting transactivator 2; <b>PDBTitle:</b> solution structure of the cited2 transactivation domain in2 complex with the p300 ch1 domain
59	<a href="#">c2pf4E_</a>	Alignment	not modelled	5.8	12	<b>PDB header:</b> hydrolase regulator/viral protein <b>Chain:</b> E: <b>PDB Molecule:</b> small t antigen; <b>PDBTitle:</b> crystal structure of the full-length simian virus 40 small t antigen2 complexed with the protein phosphatase 2a aalpha subunit
60	<a href="#">d1k0ia2</a>	Alignment	not modelled	5.8	13	<b>Fold:</b> FAD-linked reductases, C-terminal domain <b>Superfamily:</b> FAD-linked reductases, C-terminal domain <b>Family:</b> PHBH-like
61	<a href="#">c3njqB_</a>	Alignment	not modelled	5.7	18	<b>PDB header:</b> viral protein/inhibitor <b>Chain:</b> B: <b>PDB Molecule:</b> orf 17; <b>PDBTitle:</b> crystal structure of kaposi's sarcoma-associated herpesvirus protease2 in complex with dimer disruptor
62	<a href="#">d1knwa2</a>	Alignment	not modelled	5.5	9	<b>Fold:</b> TIM beta/alpha-barrel <b>Superfamily:</b> PLP-binding barrel <b>Family:</b> Alanine racemase-like, N-terminal domain
63	<a href="#">c2gutA_</a>	Alignment	not modelled	5.5	8	<b>PDB header:</b> transcription <b>Chain:</b> A: <b>PDB Molecule:</b> arc/mediator, positive cofactor 2 glutamine/q- <b>PDBTitle:</b> solution structure of the trans-activation domain of the2 human co-activator arc105
64	<a href="#">c3cr8C_</a>	Alignment	not modelled	5.5	21	<b>PDB header:</b> transferase <b>Chain:</b> C: <b>PDB Molecule:</b> sulfate adenylyl tranferase, adenylylsulfate <b>PDBTitle:</b> hexameric aps kinase from thiobacillus denitrificans
65	<a href="#">c2nw0B_</a>	Alignment	not modelled	5.5	15	<b>PDB header:</b> hydrolase <b>Chain:</b> B: <b>PDB Molecule:</b> plyb; <b>PDBTitle:</b> crystal structure of a lysin
66	<a href="#">d1pv8a_</a>	Alignment	not modelled	5.4	11	<b>Fold:</b> TIM beta/alpha-barrel <b>Superfamily:</b> Aldolase <b>Family:</b> 5-aminolaevulinate dehydratase, ALAD (porphobilinogen synthase)
67	<a href="#">c3p0sA_</a>	Alignment	not modelled	5.4	53	<b>PDB header:</b> virus <b>Chain:</b> A: <b>PDB Molecule:</b> capsid protein vp; <b>PDBTitle:</b> crystal structure of bombyx mori densovirus 1 capsid
68	<a href="#">d1olta_</a>	Alignment	not modelled	5.3	17	<b>Fold:</b> TIM beta/alpha-barrel <b>Superfamily:</b> Radical SAM enzymes <b>Family:</b> Oxygen-independent coproporphyrinogen III oxidase HemN
69	<a href="#">c2gksB_</a>	Alignment	not modelled	5.3	29	<b>PDB header:</b> transferase <b>Chain:</b> B: <b>PDB Molecule:</b> bifunctional sat/aps kinase; <b>PDBTitle:</b> crystal structure of the bi-functional atp sulfurylase-aps kinase from2 aquifex aeolicus, a chemolithotrophic thermophile
70	<a href="#">d1k4ia_</a>	Alignment	not modelled	5.2	32	<b>Fold:</b> YrdC/RibB <b>Superfamily:</b> YrdC/RibB <b>Family:</b> 3,4-dihydroxy-2-butanone 4-phosphate synthase, DHBP synthase, RibB
71	<a href="#">c3lhiA_</a>	Alignment	not modelled	5.2	13	<b>PDB header:</b> hydrolase <b>Chain:</b> A: <b>PDB Molecule:</b> putative 6-phosphogluconolactonase; <b>PDBTitle:</b> crystal structure of putative 6-2 phosphogluconolactonase(yp_207848.1) from neisseria3 gonorrhoeae fa 1090 at 1.33 a resolution
72	<a href="#">d2vgna3</a>	Alignment	not modelled	5.2	17	<b>Fold:</b> Bacillus chorismate mutase-like <b>Superfamily:</b> L30e-like <b>Family:</b> ERF1/Dom34 C-terminal domain-like
73	<a href="#">c3letB_</a>	Alignment	not modelled	5.1	6	<b>PDB header:</b> transferase <b>Chain:</b> B: <b>PDB Molecule:</b> adenosine monophosphate-protein transferase vops; <b>PDBTitle:</b> crystal structure of fic domain containing ampylator, vops