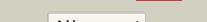
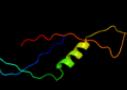
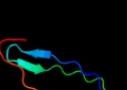
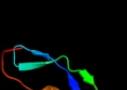
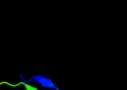


Phyre²

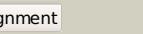
Email	i.a.kelley@imperial.ac.uk
Description	P19934
Date	Thu Jan 5 11:37:42 GMT 2012
Unique Job ID	06f97779bad92f40

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c1tolA_			100.0	95	PDB header: viral protein Chain: A: PDB Molecule: protein (fusion protein consisting of minor coat PDBTitle: fusion of n-terminal domain of the minor coat protein from2 gene iii in phage m13, and c-terminal domain of e. coli3 protein-tola
2	d1tolA2			99.9	100	Fold: TolA/TonB C-terminal domain Superfamily: TolA/TonB C-terminal domain Family: TolA
3	c2x9aB_			99.9	100	PDB header: viral protein Chain: B: PDB Molecule: membrane spanning protein, required for outer membrane PDBTitle: crystal structure of g3p from phage if1 in complex with its2 coreceptor, the c-terminal domain of tola
4	d1lr0a_			99.8	16	Fold: TolA/TonB C-terminal domain Superfamily: TolA/TonB C-terminal domain Family: TolA
5	d1ihra_			97.7	9	Fold: TolA/TonB C-terminal domain Superfamily: TolA/TonB C-terminal domain Family: TonB
6	c2grxC_			97.2	15	PDB header: metal transport Chain: C: PDB Molecule: protein tonb; PDBTitle: crystal structure of tonb in complex with fhua, e. coli2 outer membrane receptor for ferrichrome
7	c1xx3A_			97.2	11	PDB header: transport protein Chain: A: PDB Molecule: tonb protein; PDBTitle: solution structure of escherichia coli tonb-ctd
8	d2gskb1			96.9	9	Fold: TolA/TonB C-terminal domain Superfamily: TolA/TonB C-terminal domain Family: TonB
9	c2k9KA_			96.7	20	PDB header: metal transport Chain: A: PDB Molecule: tonb2; PDBTitle: molecular characterization of the tonb2 protein from vibrio2 anguillarum
10	d1u07a_			96.6	9	Fold: TolA/TonB C-terminal domain Superfamily: TolA/TonB C-terminal domain Family: TonB
11	c2dzkA_			54.3	23	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: ubx domain-containing protein 2; PDBTitle: structure of the ubx domain in mouse ubx domain-containing2 protein 2

12	c1y4cA	Alignment		50.4	17	PDB header: de novo protein Chain: A: PDB Molecule: maltose binding protein fused with designed PDBTitle: designed helical protein fusion mbp
13	c2kxjA	Alignment		47.2	22	PDB header: protein binding Chain: A: PDB Molecule: ubx domain-containing protein 4; PDBTitle: solution structure of ubx domain of human ubxd2 protein
14	d2ba0g2	Alignment		41.0	16	Fold: Ribonuclease PH domain 2-like Superfamily: Ribonuclease PH domain 2-like Family: Ribonuclease PH domain 2-like
15	d1r4xa2	Alignment		38.4	16	Fold: Subdomain of clathrin and coatomer appendage domain Superfamily: Subdomain of clathrin and coatomer appendage domain Family: Coatomer appendage domain
16	d2e7ga1	Alignment		35.4	11	Fold: Alpha-lytic protease prodomain-like Superfamily: Ribosome-binding factor A, RbfA Family: Ribosome-binding factor A, RbfA
17	c2ytbA	Alignment		35.3	36	PDB header: rna binding protein Chain: A: PDB Molecule: cold shock domain-containing protein e1; PDBTitle: solution structure of the second cold-shock domain of the human2 kiaa0885 protein (unr protein)
18	d2nn6c2	Alignment		35.1	19	Fold: Ribonuclease PH domain 2-like Superfamily: Ribonuclease PH domain 2-like Family: Ribonuclease PH domain 2-like
19	c2zfdB	Alignment		33.6	11	PDB header: signaling protein/transferase Chain: B: PDB Molecule: putative uncharacterized protein t20l15_90; PDBTitle: the crystal structure of plant specific calcium binding protein atcb122 in complex with the regulatory domain of atcpk14
20	c1ybxA	Alignment		32.0	24	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: conserved hypothetical protein; PDBTitle: conserved hypothetical protein cth-383 from clostridium thermocellum
21	d1wj4a	Alignment	not modelled	31.8	15	Fold: beta-Grasp (ubiquitin-like) Superfamily: Ubiquitin-like Family: UBX domain
22	c2kzfA	Alignment	not modelled	31.0	11	PDB header: ribosomal protein Chain: A: PDB Molecule: ribosome-binding factor a; PDBTitle: solution nmr structure of the thermotoga maritima protein tm0855 a2 putative ribosome binding factor a PDB header: protein transport Chain: A: PDB Molecule: coatomer gamma subunit; PDBTitle: crystal structure analys of the gamma-copi appendage domain
23	c1r4xA	Alignment	not modelled	29.0	14	Fold: Ribonuclease PH domain 2-like Superfamily: Ribonuclease PH domain 2-like Family: Ribonuclease PH domain 2-like
24	d2nn6e2	Alignment	not modelled	28.3	10	PDB header: hydrolase Chain: A: PDB Molecule: dengue 4 ns3 full-length protein; PDBTitle: crystal structure of the ns3 protease-helicase from dengue2 virus
25	c2vbcA	Alignment	not modelled	27.8	11	PDB header: endocytosis/exocytosis Chain: A: PDB Molecule: coatomer gamma subunit; PDBTitle: structural identification of a conserved appendage domain2 in the carboxyl-terminus of the copi gamma-subunit.
26	c1pzdA	Alignment	not modelled	25.4	13	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of the s-type pyocin domain of eca16692 protein from erwinia carotovora, northeast structural3 genomics consortium target ewr82c
27	c3mfbA	Alignment	not modelled	21.8	33	PDB header: rna binding protein Chain: A: PDB Molecule: synaptotagmin-1; PDBTitle: solution structure of rna binding domain in synaptotagmin 1
28	c2dnra	Alignment	not modelled	20.0	20	

29	c2zv4O		Alignment	not modelled	19.7	10	PDB header: structural protein Chain: O: PDB Molecule: major vault protein; PDBTitle: the structure of rat liver vault at 3.5 angstrom resolution
30	c3htyC		Alignment	not modelled	19.2	15	PDB header: structural genomics, unknown function Chain: C: PDB Molecule: hypothetical protein bt_0869; PDBTitle: crystal structure of hypothetical protein bt_0869 from bacteroides2 thetaiotaomicron vpi-5482 (np_809782.1) at 1.95 a resolution
31	c3mlpE		Alignment	not modelled	18.8	11	PDB header: transcription/dna Chain: E: PDB Molecule: transcription factor coe1; PDBTitle: early b-cell factor 1 (ebf1) bound to dna
32	c1dxzA		Alignment	not modelled	18.6	26	PDB header: transmembrane protein Chain: A: PDB Molecule: acetylcholine receptor protein, alpha chain; PDBTitle: m2 transmembrane segment of alpha-subunit of nicotinic2 acetylcholine receptor from torpedo californica, nmr, 203 structures
33	d1jb1a		Alignment	not modelled	18.4	12	Fold: LCC domain Superfamily: LCC domain Family: LCC domain
34	c2i1jA		Alignment	not modelled	17.4	17	PDB header: cell adhesion, membrane protein Chain: A: PDB Molecule: moesin; PDBTitle: moesin from spodoptera frugiperda at 2.1 angstroms resolution
35	d2dyja1		Alignment	not modelled	16.5	19	Fold: Alpha-lytic protease prodomain-like Superfamily: Ribosome-binding factor A, RbfA Family: Ribosome-binding factor A, RbfA
36	c3ol0C		Alignment	not modelled	16.3	17	PDB header: de novo protein Chain: C: PDB Molecule: de novo designed monomer trefoil-fold sub-domain which PDBTitle: crystal structure of monofoil-4p homo-trimer: de novo designed monomer2 trefoil-fold sub-domain which forms homo-trimer assembly
37	d2nn6a2		Alignment	not modelled	15.4	25	Fold: Ribonuclease PH domain 2-like Superfamily: Ribonuclease PH domain 2-like Family: Ribonuclease PH domain 2-like
38	c2kncB		Alignment	not modelled	15.1	11	PDB header: cell adhesion Chain: B: PDB Molecule: integrin beta-3; PDBTitle: platelet integrin alfa1b-beta3 transmembrane-cytoplasmic2 heterocomplex
39	d2cjoa		Alignment	not modelled	15.0	24	Fold: beta-Grasp (ubiquitin-like) Superfamily: 2Fe-2S ferredoxin-like Family: 2Fe-2S ferredoxin-related
40	d1wg1a		Alignment	not modelled	14.0	33	Fold: Ferredoxin-like Superfamily: RNA-binding domain, RBD Family: Canonical RBD
41	d1kkga		Alignment	not modelled	14.0	12	Fold: Alpha-lytic protease prodomain-like Superfamily: Ribosome-binding factor A, RbfA Family: Ribosome-binding factor A, RbfA
42	d1j8ba		Alignment	not modelled	13.4	10	Fold: YbaB-like Superfamily: YbaB-like Family: YbaB-like
43	d2je6a2		Alignment	not modelled	12.8	20	Fold: Ribonuclease PH domain 2-like Superfamily: Ribonuclease PH domain 2-like Family: Ribonuclease PH domain 2-like
44	d1s48a		Alignment	not modelled	11.7	22	Fold: DNA/RNA polymerases Superfamily: DNA/RNA polymerases Family: RNA-dependent RNA-polymerase
45	c2rmzA		Alignment	not modelled	11.4	11	PDB header: cell adhesion Chain: A: PDB Molecule: integrin beta-3; PDBTitle: bicelle-embedded integrin beta3 transmembrane segment
46	d1kyfa2		Alignment	not modelled	11.3	12	Fold: Subdomain of clathrin and coatomer appendage domain Superfamily: Subdomain of clathrin and coatomer appendage domain Family: Clathrin adaptor appendage, alpha and beta chain-specific domain
47	c3pn1A		Alignment	not modelled	11.2	20	PDB header: ligase/ligase inhibitor Chain: A: PDB Molecule: dna ligase; PDBTitle: novel bacterial nad+-dependent dna ligase inhibitors with broad2 spectrum potency and antibacterial efficacy in vivo
48	d2ux9a1		Alignment	not modelled	11.1	23	Fold: Dodecin subunit-like Superfamily: Dodecin-like Family: Dodecin-like
49	c1sfeA		Alignment	not modelled	10.9	21	PDB header: dna-binding protein Chain: A: PDB Molecule: ada o6-methylguanine-dna methyltransferase; PDBTitle: ada o6-methylguanine-dna methyltransferase from escherichia coli
50	c1x65A		Alignment	not modelled	10.7	22	PDB header: rna binding protein Chain: A: PDB Molecule: unr protein; PDBTitle: solution structure of the third cold-shock domain of the human2 kiaa0885 protein (unr protein)
51	d2k8ea1		Alignment	not modelled	10.4	14	Fold: YegP-like Superfamily: YegP-like Family: YegP-like
52	d1x6oa2		Alignment	not modelled	10.2	27	Fold: OB-fold Superfamily: Nucleic acid-binding proteins Family: Cold shock DNA-binding domain-like
53	d1nkza		Alignment	not modelled	9.7	15	Fold: Light-harvesting complex subunits Superfamily: Light-harvesting complex subunits Family: Light-harvesting complex subunits
							PDB header: hydrolase

54	c3ecyA_		Alignment	not modelled	9.6	19	Chain: A: PDB Molecule: cg4584-pa, isoform a (bcdna.Id08534); PDBTitle: crystal structural analysis of drosophila melanogaster dutpase
55	d1sfea1		Alignment	not modelled	9.6	21	Fold: DNA/RNA-binding 3-helical bundle Superfamily: Methylated DNA-protein cysteine methyltransferase, C-terminal domain Family: Methylated DNA-protein cysteine methyltransferase, C-terminal domain
56	d2cr5a1		Alignment	not modelled	9.5	20	Fold: beta-Grasp (ubiquitin-like) Superfamily: Ubiquitin-like Family: UBX domain
57	d1t2a_		Alignment	not modelled	9.5	14	Fold: 5-bladed beta-propeller Superfamily: Tachylectin-2 Family: Tachylectin-2
58	c3ajbB_		Alignment	not modelled	9.1	42	PDB header: protein transport Chain: B: PDB Molecule: peroxisomal biogenesis factor 19; PDBTitle: crystal structure of human pex3p in complex with n-terminal pex19p2 peptide
59	d1h8ca_		Alignment	not modelled	9.0	27	Fold: beta-Grasp (ubiquitin-like) Superfamily: Ubiquitin-like Family: UBX domain
60	c1culB_		Alignment	not modelled	9.0	28	PDB header: hydrolase Chain: B: PDB Molecule: protein (protease/helicase ns3); PDBTitle: crystal structure of an enzyme complex from hepatitis c2 virus
61	d1pa4a_		Alignment	not modelled	9.0	10	Fold: Alpha-lytic protease prodomain-like Superfamily: Ribosome-binding factor A, RbfA Family: Ribosome-binding factor A, RbfA
62	c1ky6A_		Alignment	not modelled	8.9	12	PDB header: endocytosis/exocytosis Chain: A: PDB Molecule: alpha-adaptin c; PDBTitle: ap-2 clathrin adaptor alpha-appendage in complex with epsin2 dpw peptide
63	d1puga_		Alignment	not modelled	8.9	3	Fold: YbaB-like Superfamily: YbaB-like Family: YbaB-like
64	d1v9pa3		Alignment	not modelled	8.8	15	Fold: ATP-grasp Superfamily: DNA ligase/mRNA capping enzyme, catalytic domain Family: Adenylation domain of NAD+-dependent DNA ligase
65	d1ccwb_		Alignment	not modelled	8.7	18	Fold: TIM beta/alpha-barrel Superfamily: Cobalamin (vitamin B12)-dependent enzymes Family: Glutamate mutase, large subunit
66	c3onrl_		Alignment	not modelled	8.7	20	PDB header: metal binding protein Chain: I: PDB Molecule: protein transport protein sece2; PDBTitle: crystal structure of the calcium chelating immunodominant antigen,2 calcium dodecin (rv0379),from mycobacterium tuberculosis with a novel3 calcium-binding site
67	d1n1ba1		Alignment	not modelled	8.6	23	Fold: alpha/alpha toroid Superfamily: Terpenoid cyclases/Protein prenyltransferases Family: Terpenoid cyclase N-terminal domain
68	c2zsjB_		Alignment	not modelled	8.6	10	PDB header: lyase Chain: B: PDB Molecule: threonine synthase; PDBTitle: crystal structure of threonine synthase from aquifex aeolicus vf5
69	d1i42a_		Alignment	not modelled	8.5	23	Fold: beta-Grasp (ubiquitin-like) Superfamily: Ubiquitin-like Family: UBX domain
70	c2k59B_		Alignment	not modelled	8.5	33	PDB header: transport protein Chain: B: PDB Molecule: neuronal acetylcholine receptor subunit beta-2; PDBTitle: nmr structures of the second transmembrane domain of the2 neuronal acetylcholine receptor beta 2 subunit
71	d3bzka5		Alignment	not modelled	8.5	21	Fold: Ribonuclease H-like motif Superfamily: Ribonuclease H-like Family: Tex RuvX-like domain-like
72	d1ta8a_		Alignment	not modelled	8.3	22	Fold: ATP-grasp Superfamily: DNA ligase/mRNA capping enzyme, catalytic domain Family: Adenylation domain of NAD+-dependent DNA ligase
73	c3p2oB_		Alignment	not modelled	8.3	11	PDB header: oxidoreductase, hydrolase Chain: B: PDB Molecule: bifunctional protein fold; PDBTitle: crystal structure of fold bifunctional protein from campylobacter2 jejuni
74	c2jpxA_		Alignment	not modelled	8.2	14	PDB header: viral protein Chain: A: PDB Molecule: vpu protein; PDBTitle: a18h vpu tm structure in lipid bilayers
75	c217qa_		Alignment	not modelled	8.2	27	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: conserved protein found in conjugate transposon; PDBTitle: solution nmr structure of conjugate transposon protein bvu_1572(27-2 141) from bacteroides vulgatus, northeast structural genomics3 consortium target bvr155
76	c1zbtA_		Alignment	not modelled	8.0	16	PDB header: translation Chain: A: PDB Molecule: peptide chain release factor 1; PDBTitle: crystal structure of peptide chain release factor 1 (rf-1) (smu.1085)2 from streptococcus mutans at 2.34 a resolution
77	c1s1hJ_		Alignment	not modelled	8.0	13	PDB header: ribosome Chain: J: PDB Molecule: 40s ribosomal protein s20; PDBTitle: structure of the ribosomal 80s-eef2-sordarin complex from2 yeast obtained by docking atomic models for rna and protein3 components into a 11.7 a cryo-em map. this file, 1s1h,4 contains 40s subunit; the 60s ribosomal subunit is in file5 1s1i.
78	c2kncA_		Alignment	not modelled	8.0	10	PDB header: cell adhesion Chain: A: PDB Molecule: integrin alpha-iiib; PDBTitle: platelet integrin alfa1ib-beta3 transmembrane-cytoplasmic2 heterocomplex

79	d1jda_	Alignment	not modelled	7.9	15	Fold: Light-harvesting complex subunits Superfamily: Light-harvesting complex subunits Family: Light-harvesting complex subunits
80	c2ihr1_	Alignment	not modelled	7.9	12	PDB header: translation Chain: 1: PDB Molecule: peptide chain release factor 2; PDBTitle: rf2 of thermus thermophilus
81	d1j3wa_	Alignment	not modelled	7.9	22	Fold: Profilin-like Superfamily: Roadblock/LC7 domain Family: Roadblock/LC7 domain
82	c3p2oA_	Alignment	not modelled	7.8	11	PDB header: oxidoreductase, hydrolase Chain: A: PDB Molecule: bifunctional protein fold; PDBTitle: crystal structure of fold bifunctional protein from campylobacter jejuni
83	c3muxB_	Alignment	not modelled	7.6	21	PDB header: lyase Chain: B: PDB Molecule: putative 4-hydroxy-2-oxoglutarate aldolase; PDBTitle: the crystal structure of a putative 4-hydroxy-2-oxoglutarate aldolase2 from bacillus anthracis to 1.45a
84	d1yo5a1	Alignment	not modelled	7.6	15	Fold: Ribosomal protein S5 domain 2-like Superfamily: Ribosomal protein S5 domain 2-like Family: Ribonuclease PH domain 1-like
85	c213baA_	Alignment	not modelled	7.5	27	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: conserved protein found in conjugate transposon; PDBTitle: solution nmr structure of the bt_0084 lipoprotein from bacteroides2 thetaiotaomicron, northeast structural genomics consortium target3 btr376
86	c3oqtP_	Alignment	not modelled	7.4	16	PDB header: flavoprotein Chain: P: PDB Molecule: rv1498a protein; PDBTitle: crystal structure of rv1498a protein from mycobacterium tuberculosis
87	c2y69R_	Alignment	not modelled	7.3	33	PDB header: electron transport Chain: R: PDB Molecule: cytochrome c oxidase subunit 5a; PDBTitle: bovine heart cytochrome c oxidase re-refined with molecular2 oxygen
88	d1v54e_	Alignment	not modelled	7.3	33	Fold: alpha-alpha superhelix Superfamily: Cytochrome c oxidase subunit E Family: Cytochrome c oxidase subunit E
89	c1a4iB_	Alignment	not modelled	7.1	17	PDB header: oxidoreductase Chain: B: PDB Molecule: methylenetetrahydrofolate dehydrogenase / PDBTitle: human tetrahydrofolate dehydrogenase / cyclohydrolase
90	d1vk8a_	Alignment	not modelled	7.1	18	Fold: Ferredoxin-like Superfamily: MTH1187/YkoF-like Family: MTH1187-like
91	d1dxwa_	Alignment	not modelled	7.1	31	Fold: Trypsin-like serine proteases Superfamily: Trypsin-like serine proteases Family: Viral proteases
92	d1b04a_	Alignment	not modelled	7.1	15	Fold: ATP-grasp Superfamily: DNA ligase/mRNA capping enzyme, catalytic domain Family: Adenylation domain of NAD+-dependent DNA ligase
93	c1a11A_	Alignment	not modelled	7.0	30	PDB header: acetylcholine receptor Chain: A: PDB Molecule: acetylcholine receptor m2; PDBTitle: nmr structure of membrane spanning segment 2 of the2 acetylcholine receptor in dpc micelles, 10 structures
94	c1yq3C_	Alignment	not modelled	7.0	29	PDB header: oxidoreductase Chain: C: PDB Molecule: succinate dehydrogenase cytochrome b, large subunit; PDBTitle: avian respiratory complex ii with oxaloacetate and ubiquinone
95	c1eq8B_	Alignment	not modelled	7.0	30	PDB header: signaling protein Chain: B: PDB Molecule: acetylcholine receptor protein; PDBTitle: three-dimensional structure of the pentameric helical2 bundle of the acetylcholine receptor m2 transmembrane3 segment
96	c1eq8D_	Alignment	not modelled	7.0	30	PDB header: signaling protein Chain: D: PDB Molecule: acetylcholine receptor protein; PDBTitle: three-dimensional structure of the pentameric helical2 bundle of the acetylcholine receptor m2 transmembrane3 segment
97	c1eq8C_	Alignment	not modelled	7.0	30	PDB header: signaling protein Chain: C: PDB Molecule: acetylcholine receptor protein; PDBTitle: three-dimensional structure of the pentameric helical2 bundle of the acetylcholine receptor m2 transmembrane3 segment
98	c1eq8E_	Alignment	not modelled	7.0	30	PDB header: signaling protein Chain: E: PDB Molecule: acetylcholine receptor protein; PDBTitle: three-dimensional structure of the pentameric helical2 bundle of the acetylcholine receptor m2 transmembrane3 segment
99	c1eq8A_	Alignment	not modelled	7.0	30	PDB header: signaling protein Chain: A: PDB Molecule: acetylcholine receptor protein; PDBTitle: three-dimensional structure of the pentameric helical2 bundle of the acetylcholine receptor m2 transmembrane3 segment