












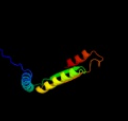








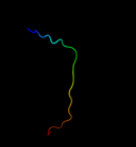


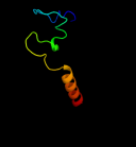
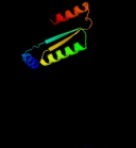



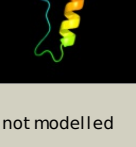


Phyre2

Email	I.a.kelley@imperial.ac.uk
Description	P14407
Date	Thu Jan 5 11:34:03 GMT 2012
Unique Job ID	8ddc337b235d61fb

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	d2isba1	 Alignment		100.0	31	Fold: The "swivelling" beta/beta/alpha domain Superfamily: FumA C-terminal domain-like Family: FumA C-terminal domain-like
2	d1ed7a_	 Alignment		58.8	12	Fold: WW domain-like Superfamily: Carbohydrate binding domain Family: Carbohydrate binding domain
3	c1k98A_	 Alignment		53.2	21	PDB header: transferase Chain: A: PDB Molecule: methionine synthase; PDBTitle: adomet complex of meth c-terminal fragment
4	c3fpnA_	 Alignment		51.0	21	PDB header: dna binding protein Chain: A: PDB Molecule: geobacillus stearothermophilus uvra interaction PDBTitle: crystal structure of uvra-uvrb interaction domains
5	c2xmoB_	 Alignment		38.2	18	PDB header: hydrolase Chain: B: PDB Molecule: lmo2642 protein; PDBTitle: the crystal structure of lmo2642
6	d1ei5a2	 Alignment		37.1	25	Fold: Streptavidin-like Superfamily: D-aminopeptidase, middle and C-terminal domains Family: D-aminopeptidase, middle and C-terminal domains
7	c3l07B_	 Alignment		36.5	17	PDB header: oxidoreductase,hydrolase Chain: B: PDB Molecule: bifunctional protein fold; PDBTitle: methylenetetrahydrofolate dehydrogenase/methenyltetrahydrofolate2 cyclohydrolase, putative bifunctional protein fold from francisella3 tularensis.
8	d3bula2	 Alignment		36.4	25	Fold: Flavodoxin-like Superfamily: Cobalamin (vitamin B12)-binding domain Family: Cobalamin (vitamin B12)-binding domain
9	c3p2oA_	 Alignment		35.8	18	PDB header: oxidoreductase, hydrolase Chain: A: PDB Molecule: bifunctional protein fold; PDBTitle: crystal structure of fold bifunctional protein from campylobacter2 jejuni
10	d12asa_	 Alignment		34.3	18	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Class II aminoacyl-tRNA synthetase (aaRS)-like, catalytic domain
11	c3p2oB_	 Alignment		32.4	18	PDB header: oxidoreductase, hydrolase Chain: B: PDB Molecule: bifunctional protein fold; PDBTitle: crystal structure of fold bifunctional protein from campylobacter2 jejuni

12	c2zoeA	Alignment		31.2	23	PDB header: toxin Chain: A: PDB Molecule: hemagglutinin components ha3; PDBTitle: ha3 subcomponent of clostridium botulinum type c progenitor2 toxin, complex with n-acetylneuramic acid
13	c2d49A	Alignment		28.5	18	PDB header: hydrolase Chain: A: PDB Molecule: chitinase c; PDBTitle: solution structure of the chitin-binding domain of2 streptomyces griseus chitinase c
14	c2c2xB	Alignment		28.4	14	PDB header: oxidoreductase Chain: B: PDB Molecule: methylenetetrahydrofolate dehydrogenase- PDBTitle: three dimensional structure of bifunctional2 methylenetetrahydrofolate dehydrogenase-cyclohydrolase3 from mycobacterium tuberculosis
15	c2e0iD	Alignment		28.3	12	PDB header: lyase Chain: D: PDB Molecule: 432aa long hypothetical deoxyribodipyrimidine photolyase; PDBTitle: crystal structure of archaeal photolyase from sulfolobus tokodaii with2 two fad molecules: implication of a novel light-harvesting cofactor
16	d1a4ia2	Alignment		26.5	16	Fold: Amino acid dehydrogenase-like, N-terminal domain Superfamily: Amino acid dehydrogenase-like, N-terminal domain Family: Tetrahydrofolate dehydrogenase/cyclohydrolase
17	d1aiwa	Alignment		25.7	7	Fold: WW domain-like Superfamily: Carbohydrate binding domain Family: Carbohydrate binding domain
18	d2piea1	Alignment		25.4	21	Fold: SMAD/FHA domain Superfamily: SMAD/FHA domain Family: FHA domain
19	d1vkza2	Alignment		24.2	21	Fold: PreATP-grasp domain Superfamily: PreATP-grasp domain Family: BC N-terminal domain-like
20	d1yqea1	Alignment		24.1	8	Fold: Phosphorylase/hydrolase-like Superfamily: AF0625-like Family: AF0625-like
21	c2gfgC	Alignment	not modelled	23.6	9	PDB header: structural genomics, unknown function Chain: C: PDB Molecule: upf0204 protein ph0006; PDBTitle: structure of protein of unknown function ph0006 from pyrococcus2 horikoshii
22	c3lzkC	Alignment	not modelled	23.4	18	PDB header: hydrolase Chain: C: PDB Molecule: fumarylacetoacetate hydrolase family protein; PDBTitle: the crystal structure of a probably aromatic amino acid2 degradation protein from sinorhizobium meliloti 1021
23	c3cr8C	Alignment	not modelled	22.7	27	PDB header: transferase Chain: C: PDB Molecule: sulfate adenyllyltransferase, adenyllylsulfate PDBTitle: hexameric aps kinase from thiobacillus denitrificans
24	d1b8aa1	Alignment	not modelled	22.6	6	Fold: OB-fold Superfamily: Nucleic acid-binding proteins Family: Anticodon-binding domain
25	d1goia1	Alignment	not modelled	21.8	18	Fold: WW domain-like Superfamily: Carbohydrate binding domain Family: Carbohydrate binding domain
26	d1o6aa	Alignment	not modelled	21.5	13	Fold: Surface presentation of antigens (SPOA) Superfamily: Surface presentation of antigens (SPOA) Family: Surface presentation of antigens (SPOA)
27	d1v58a1	Alignment	not modelled	21.3	13	Fold: Thioredoxin fold Superfamily: Thioredoxin-like Family: DsbC/DsbG C-terminal domain-like
28	d2gqba1	Alignment	not modelled	21.2	35	Fold: RPA2825-like Superfamily: RPA2825-like Family: RPA2825-like
						PDB header: isomerase,biosynthetic protein

29	c3orsD_	Alignment	not modelled	21.1	14	Chain: D: PDB Molecule: n5-carboxyaminoimidazole ribonucleotide mutase; PDBTitle: crystal structure of n5-carboxyaminoimidazole ribonucleotide mutase2 from staphylococcus aureus
30	d2gfa1	Alignment	not modelled	20.5	9	Fold: Phosphorylase/hydrolase-like Superfamily: AF0625-like Family: AF0625-like
31	c2crvA_	Alignment	not modelled	19.6	18	PDB header: translation Chain: A: PDB Molecule: translation initiation factor if-2; PDBTitle: solution structure of c-terminal domain of mitochondrial2 translational initiationfactor 2
32	d1vjea_	Alignment	not modelled	19.3	25	Fold: LuxS/MPP-like metallohydrolase Superfamily: LuxS/MPP-like metallohydrolase Family: Autoinducer-2 production protein LuxS
33	d1ooya2	Alignment	not modelled	19.2	19	Fold: NagB/RpiA/CoA transferase-like Superfamily: NagB/RpiA/CoA transferase-like Family: CoA transferase alpha subunit-like
34	d1muja2	Alignment	not modelled	18.4	35	Fold: MHC antigen-recognition domain Superfamily: MHC antigen-recognition domain Family: MHC antigen-recognition domain
35	d1ni9a_	Alignment	not modelled	18.1	23	Fold: Carbohydrate phosphatase Superfamily: Carbohydrate phosphatase Family: GlpX-like bacterial fructose-1,6-bisphosphatase
36	c3trhl_	Alignment	not modelled	17.8	10	PDB header: lyase Chain: I: PDB Molecule: phosphoribosylaminoimidazole carboxylase PDBTitle: structure of a phosphoribosylaminoimidazole carboxylase catalytic2 subunit (pure) from coxiella burnetii
37	c2j7pA_	Alignment	not modelled	17.4	17	PDB header: signal recognition Chain: A: PDB Molecule: signal recognition particle protein; PDBTitle: gmppnp-stabilized ng domain complex of the srp gtpases ffh2 and ftsy
38	c3uotB_	Alignment	not modelled	17.3	6	PDB header: cell cycle Chain: B: PDB Molecule: mediator of dna damage checkpoint protein 1; PDBTitle: crystal structure of mdc1 fha domain in complex with a phosphorylated2 peptide from the mdc1 n-terminus
39	d2piaa1	Alignment	not modelled	17.1	0	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
40	c2qv6D_	Alignment	not modelled	17.0	9	PDB header: hydrolase Chain: D: PDB Molecule: gtp cyclohydrolase iii; PDBTitle: gtp cyclohydrolase iii from m. jannaschii (mj0145)2 complexed with gtp and metal ions
41	d1edza2	Alignment	not modelled	17.0	10	Fold: Aminoacid dehydrogenase-like, N-terminal domain Superfamily: Aminoacid dehydrogenase-like, N-terminal domain Family: Tetrahydrofolate dehydrogenase/cyclohydrolase
42	d2cp6a1	Alignment	not modelled	16.5	15	Fold: SH3-like barrel Superfamily: Cap-Gly domain Family: Cap-Gly domain
43	d2oz4a1	Alignment	not modelled	16.2	31	Fold: Immunoglobulin-like beta-sandwich Superfamily: Immunoglobulin Family: C2 set domains
44	d1j98a_	Alignment	not modelled	16.1	45	Fold: LuxS/MPP-like metallohydrolase Superfamily: LuxS/MPP-like metallohydrolase Family: Autoinducer-2 production protein LuxS
45	d2vzsa5	Alignment	not modelled	16.1	15	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: beta-glycanases
46	d1g3ga_	Alignment	not modelled	16.0	17	Fold: SMAD/FHA domain Superfamily: SMAD/FHA domain Family: FHA domain
47	d1fnda1	Alignment	not modelled	15.8	29	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
48	c3ff4A_	Alignment	not modelled	15.6	10	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of uncharacterized protein chu_1412
49	d2eyqa1	Alignment	not modelled	15.5	6	Fold: SH3-like barrel Superfamily: CarD-like Family: CarD-like
50	c3c00B_	Alignment	not modelled	15.1	11	PDB header: membrane protein, protein transport Chain: B: PDB Molecule: escu; PDBTitle: crystal structural of the mutated g247t escu/spas c-terminal domain
51	c3eeqB_	Alignment	not modelled	15.0	31	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: putative cobalamin biosynthesis protein g PDBTitle: crystal structure of a putative cobalamin biosynthesis2 protein g homolog from sulfobolus solfataricus
52	d1jr2a_	Alignment	not modelled	14.8	21	Fold: HemD-like Superfamily: HemD-like Family: HemD-like
53	c1jr2A_	Alignment	not modelled	14.8	21	PDB header: lyase Chain: A: PDB Molecule: uroporphyrinogen-iii synthase; PDBTitle: structure of uroporphyrinogen iii synthase
54	d1n0ua3	Alignment	not modelled	14.7	10	Fold: Ribosomal protein S5 domain 2-like Superfamily: Ribosomal protein S5 domain 2-like Family: Translational machinery components
						PDB header: structural genomics, unknown function

55	c2l9dA_	Alignment	not modelled	14.7	17	Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: solution structure of the protein yp_546394.1, the first structural2 representative of the pfam family pf12112
56	d1luhta_	Alignment	not modelled	14.4	13	Fold: SMAD/FHA domain Superfamily: SMAD/FHA domain Family: FHA domain
57	d1sf8a_	Alignment	not modelled	14.0	23	Fold: HSP90 C-terminal domain Superfamily: HSP90 C-terminal domain Family: HSP90 C-terminal domain
58	c2iheA_	Alignment	not modelled	13.9	15	PDB header: dna binding protein Chain: A: PDB Molecule: single-stranded dna-binding protein; PDBTitle: crystal structure of wild-type single-stranded dna binding protein2 from thermus aquaticus
59	c3kw0D_	Alignment	not modelled	13.4	12	PDB header: hydrolase Chain: D: PDB Molecule: cysteine peptidase; PDBTitle: crystal structure of cysteine peptidase (np_982244.1) from bacillus2 cereus atcc 10987 at 2.50 a resolution
60	d1a5ra_	Alignment	not modelled	13.4	11	Fold: beta-Grasp (ubiquitin-like) Superfamily: Ubiquitin-like Family: Ubiquitin-related
61	c3qq5A_	Alignment	not modelled	13.3	20	PDB header: oxidoreductase Chain: A: PDB Molecule: small gtp-binding protein; PDBTitle: crystal structure of the [fefc]-hydrogenase maturation protein hydf
62	d1owla1	Alignment	not modelled	13.0	14	Fold: Cryptochrome/photolyase FAD-binding domain Superfamily: Cryptochrome/photolyase FAD-binding domain Family: Cryptochrome/photolyase FAD-binding domain
63	c3fmxX_	Alignment	not modelled	13.0	17	PDB header: oxidoreductase Chain: X: PDB Molecule: tartrate dehydrogenase/decarboxylase; PDBTitle: crystal structure of tartrate dehydrogenase from pseudomonas2 putida complexed with nadh
64	c1tezB_	Alignment	not modelled	12.9	14	PDB header: lyase/dna Chain: B: PDB Molecule: deoxyribodipyrimidine photolyase; PDBTitle: complex between dna and the dna photolyase from anacystis nidulans
65	d1es0a2	Alignment	not modelled	12.8	35	Fold: MHC antigen-recognition domain Superfamily: MHC antigen-recognition domain Family: MHC antigen-recognition domain
66	c3mxnB_	Alignment	not modelled	12.6	24	PDB header: replication Chain: B: PDB Molecule: recq-mediated genome instability protein 2; PDBTitle: crystal structure of the rmi core complex
67	c3cyyA_	Alignment	not modelled	12.5	22	PDB header: peptide binding protein Chain: A: PDB Molecule: tight junction protein zo-1; PDBTitle: the crystal structure of zo-1 pdz2 in complex with the cx43 peptide
68	c2jlhA_	Alignment	not modelled	12.5	13	PDB header: protein transport Chain: A: PDB Molecule: yop proteins translocation protein u; PDBTitle: crystal structure of the cytoplasmic domain of yersinia2 pestis yscu n263a mutant
69	c3en2A_	Alignment	not modelled	12.4	20	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: probable primosomal replication protein n; PDBTitle: three-dimensional structure of the protein prib from2 ralstonia solanacearum at the resolution 2.3a. northeast3 structural genomics consortium target rsr213c.
70	d2gc6a1	Alignment	not modelled	12.4	18	Fold: MurD-like peptide ligases, peptide-binding domain Superfamily: MurD-like peptide ligases, peptide-binding domain Family: Folypolyglutamate synthetase, C-terminal domain
71	d1u3da1	Alignment	not modelled	12.3	20	Fold: Cryptochrome/photolyase FAD-binding domain Superfamily: Cryptochrome/photolyase FAD-binding domain Family: Cryptochrome/photolysase FAD-binding domain
72	c3chvA_	Alignment	not modelled	12.3	18	PDB header: metal binding protein Chain: A: PDB Molecule: prokaryotic domain of unknown function (duf849) with a tim PDBTitle: crystal structure of a prokaryotic domain of unknown function (duf849)2 member (spoa0042) from silicibacter pomeroyi dss-3 at 1.45 a3 resolution
73	c1a4iB_	Alignment	not modelled	12.0	16	PDB header: oxidoreductase Chain: B: PDB Molecule: methylenetetrahydrofolate dehydrogenase / PDBTitle: human tetrahydrofolate dehydrogenase / cyclohydrolase
74	c3ibgF_	Alignment	not modelled	12.0	17	PDB header: hydrolase Chain: F: PDB Molecule: atpase, subunit of the get complex; PDBTitle: crystal structure of aspergillus fumigatus get3 with bound2 adp
75	c2oqjF_	Alignment	not modelled	11.9	71	PDB header: immune system Chain: F: PDB Molecule: peptide 2g12.1 (acppshvldmrsgtclaaegk); PDBTitle: crystal structure analysis of fab 2g12 in complex with peptide 2g12.1
76	d2coza1	Alignment	not modelled	11.8	16	Fold: SH3-like barrel Superfamily: Cap-Gly domain Family: Cap-Gly domain
77	c3o59X_	Alignment	not modelled	11.6	46	PDB header: transferase Chain: X: PDB Molecule: dna polymerase ii large subunit; PDBTitle: dna polymerase d large subunit dp2(1-300) from pyrococcus horikoshii
78	c3t7yB_	Alignment	not modelled	11.6	11	PDB header: protein transport Chain: B: PDB Molecule: yop proteins translocation protein u; PDBTitle: structure of an autocleavage-inactive mutant of the cytoplasmic domain2 of ct091, the yscu homologue of chlamydia trachomatis
79	d2f2ab1	Alignment	not modelled	11.5	19	Fold: GatB/YqeY motif Superfamily: GatB/YqeY motif Family: GatB/GatE C-terminal domain-like
						Fold: OB-fold

80	d1c0aa1	Alignment	not modelled	11.5	21	Superfamily: Nucleic acid-binding proteins Family: Anticodon-binding domain
81	d2cnda1	Alignment	not modelled	11.4	25	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
82	d4ubpb	Alignment	not modelled	11.1	17	Fold: beta-clip Superfamily: Urease, beta-subunit Family: Urease, beta-subunit
83	d1o9ya	Alignment	not modelled	11.1	20	Fold: Surface presentation of antigens (SPOA) Superfamily: Surface presentation of antigens (SPOA) Family: Surface presentation of antigens (SPOA)
84	d1e9ya1	Alignment	not modelled	11.0	12	Fold: beta-clip Superfamily: Urease, beta-subunit Family: Urease, beta-subunit
85	d2ew0a1	Alignment	not modelled	11.0	22	Fold: VC0467-like Superfamily: VC0467-like Family: VC0467-like
86	c3d8tB	Alignment	not modelled	10.9	20	PDB header: lyase Chain: B: PDB Molecule: uroporphyrinogen-iii synthase; PDBTitle: thermus thermophilus uroporphyrinogen iii synthase
87	c2oqjL	Alignment	not modelled	10.8	71	PDB header: immune system Chain: L: PDB Molecule: peptide 2g12.1 (acppshvldmrsgtclaaegk); PDBTitle: crystal structure analysis of fab 2g12 in complex with peptide 2g12.1
88	c2oqjI	Alignment	not modelled	10.8	71	PDB header: immune system Chain: I: PDB Molecule: peptide 2g12.1 (acppshvldmrsgtclaaegk); PDBTitle: crystal structure analysis of fab 2g12 in complex with peptide 2g12.1
89	c2oqjC	Alignment	not modelled	10.8	71	PDB header: immune system Chain: C: PDB Molecule: peptide 2g12.1 (acppshvldmrsgtclaaegk); PDBTitle: crystal structure analysis of fab 2g12 in complex with peptide 2g12.1
90	d1e32a1	Alignment	not modelled	10.8	10	Fold: Double psi beta-barrel Superfamily: ADC-like Family: Cdc48 N-terminal domain-like
91	d1pcfa	Alignment	not modelled	10.6	47	Fold: ssDNA-binding transcriptional regulator domain Superfamily: ssDNA-binding transcriptional regulator domain Family: Transcriptional coactivator PC4 C-terminal domain
92	c3rfuC	Alignment	not modelled	10.4	15	PDB header: hydrolase, membrane protein Chain: C: PDB Molecule: copper efflux atpase; PDBTitle: crystal structure of a copper-transporting pib-type atpase
93	c1zgxA	Alignment	not modelled	10.3	18	PDB header: hydrolase Chain: A: PDB Molecule: guanyl-specific ribonuclease sa; PDBTitle: crystal structure of ribonuclease mutant
94	c2ihfA	Alignment	not modelled	10.3	15	PDB header: dna binding protein Chain: A: PDB Molecule: single-stranded dna-binding protein; PDBTitle: crystal structure of deletion mutant delta 228-252 r190a of the2 single-stranded dna binding protein from thermus aquaticus
95	d1sm4a1	Alignment	not modelled	10.2	21	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
96	d1qx4a1	Alignment	not modelled	10.2	14	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
97	d1xnea	Alignment	not modelled	10.2	15	Fold: PUA domain-like Superfamily: PUA domain-like Family: ProFAR isomerase associated domain
98	d1krha1	Alignment	not modelled	10.1	29	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
99	c3op0B	Alignment	not modelled	10.1	58	PDB header: signaling protein/signaling protein regu Chain: B: PDB Molecule: signal transduction protein cbl-c; PDBTitle: crystal structure of cbl-c (cbl-3) tkb domain in complex with egfr2 py1069 peptide