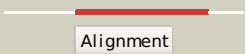

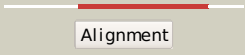
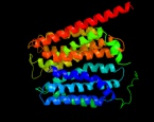
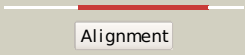

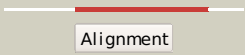



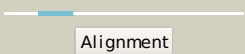

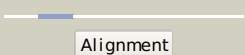

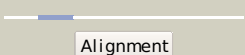


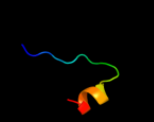


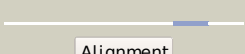
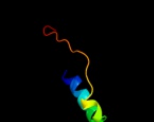


Phyre2

Email	I.a.kelley@imperial.ac.uk
Description	A1A5C7
Date	Wed May 9 18:02:57 BST 2012
Unique Job ID	7e23fddf87cb6512

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c3o7pA_	 Alignment		100.0	8	PDB header: transport protein Chain: A: PDB Molecule: l-fucose-proton symporter; PDBTitle: crystal structure of the e.coli fucose:proton symporter, fucp (n162a)
2	d1pw4a_	 Alignment		100.0	16	Fold: MFS general substrate transporter Superfamily: MFS general substrate transporter Family: Glycerol-3-phosphate transporter
3	c2xutC_	 Alignment		100.0	11	PDB header: transport protein Chain: C: PDB Molecule: proton/peptide symporter family protein; PDBTitle: crystal structure of a proton dependent oligopeptide (pot)2 family transporter.
4	c2gfpA_	 Alignment		99.9	13	PDB header: membrane protein Chain: A: PDB Molecule: multidrug resistance protein d; PDBTitle: structure of the multidrug transporter emrd from2 escherichia coli
5	d1pv7a_	 Alignment		99.9	9	Fold: MFS general substrate transporter Superfamily: MFS general substrate transporter Family: LacY-like proton/sugar symporter
6	d1vhib_	 Alignment		32.5	50	Fold: Ferredoxin-like Superfamily: Viral DNA-binding domain Family: Viral DNA-binding domain
7	d1b3ta_	 Alignment		28.7	50	Fold: Ferredoxin-like Superfamily: Viral DNA-binding domain Family: Viral DNA-binding domain
8	c2jm2A_	 Alignment		27.7	47	PDB header: hormone/growth factor Chain: A: PDB Molecule: insulin-like growth factor-binding protein 6; PDBTitle: structure of the n-terminal subdomain of insulin-like2 growth factor (igf) binding protein-6 and its interactions3 with igfs
9	d1z8ga2	 Alignment		26.4	28	Fold: SRCR-like Superfamily: SRCR-like Family: Hepsin, N-terminal domain
10	c2oyaA_	 Alignment		22.2	28	PDB header: ligand binding protein Chain: A: PDB Molecule: macrophage receptor marco; PDBTitle: crystal structure analysis of the dimeric form of the srcr domain of2 mouse marco
11	c3rnvA_	 Alignment		20.4	13	PDB header: hydrolase Chain: A: PDB Molecule: helper component proteinase; PDBTitle: structure of the autocatalytic cysteine protease domain of potyvirus2 helper-component proteinase

12	c1r7gA_	Alignment		18.9	50	PDB header: membrane protein Chain: A: PDB Molecule: genome polyprotein; PDBTitle: nmr structure of the membrane anchor domain (1-31) of the2 nonstructural protein 5a (ns5a) of hepatitis c virus3 (minimized average structure, sample in 100mm dpc)
13	c1z8gA_	Alignment		18.0	28	PDB header: hydrolase/hydrolase inhibitor Chain: A: PDB Molecule: serine protease hepsin; PDBTitle: crystal structure of the extracellular region of the transmembrane2 serine protease hepsin with covalently bound preferred substrate.
14	d1riea_	Alignment		16.5	33	Fold: ISP domain Superfamily: ISP domain Family: Rieske iron-sulfur protein (ISP)
15	d1tkla_	Alignment		15.8	18	Fold: Coproporphyrinogen III oxidase Superfamily: Coproporphyrinogen III oxidase Family: Coproporphyrinogen III oxidase
16	c1s6xA_	Alignment		15.7	67	PDB header: toxin Chain: A: PDB Molecule: kvap channel; PDBTitle: solution structure of vstx
17	c2nvga_	Alignment		15.6	33	PDB header: oxidoreductase Chain: A: PDB Molecule: ubiquinol-cytochrome c reductase iron-sulfur subunit; PDBTitle: soluble domain of rieske iron sulfur protein.
18	c2g9pA_	Alignment		15.5	21	PDB header: antimicrobial protein Chain: A: PDB Molecule: antimicrobial peptide laticin 2a; PDBTitle: nmr structure of a novel antimicrobial peptide, laticin 2a,2 from spider (lachesana tarabaevi) venom
19	d2nefa_	Alignment		14.9	27	Fold: Regulatory factor Nef Superfamily: Regulatory factor Nef Family: Regulatory factor Nef
20	c2aexA_	Alignment		14.4	25	PDB header: oxidoreductase Chain: A: PDB Molecule: coproporphyrinogen iii oxidase, mitochondrial; PDBTitle: the 1.58a crystal structure of human coproporphyrinogen oxidase2 reveals the structural basis of hereditary coproporphyruria
21	c3rbba_	Alignment	not modelled	14.2	30	PDB header: viral protein, protein binding Chain: A: PDB Molecule: protein nef; PDBTitle: hiv-1 nef protein in complex with engineered hck sh3 domain
22	d1by2a_	Alignment	not modelled	13.8	39	Fold: SRCR-like Superfamily: SRCR-like Family: Scavenger receptor cysteine-rich (SRCR) domain
23	d1vjua_	Alignment	not modelled	13.2	36	Fold: Coproporphyrinogen III oxidase Superfamily: Coproporphyrinogen III oxidase Family: Coproporphyrinogen III oxidase
24	d1efnb_	Alignment	not modelled	12.7	26	Fold: Regulatory factor Nef Superfamily: Regulatory factor Nef Family: Regulatory factor Nef
25	c2ottY_	Alignment	not modelled	12.5	30	PDB header: immune system Chain: Y: PDB Molecule: t-cell surface glycoprotein cd5; PDBTitle: crystal structure of cd5_diii
26	d2fyuk1	Alignment	not modelled	12.5	17	Fold: Single transmembrane helix Superfamily: Subunit XI (6.4 kDa protein) of cytochrome bc1 complex (Ubiquinol-cytochrome c reductase) Family: Subunit XI (6.4 kDa protein) of cytochrome bc1 complex (Ubiquinol-cytochrome c reductase)
27	c3b9yA_	Alignment	not modelled	12.2	11	PDB header: transport protein Chain: A: PDB Molecule: ammonium transporter family rh-like protein; PDBTitle: crystal structure of the nitrosomonas europaea rh protein
28	c3gceA_	Alignment	not modelled	10.0	21	PDB header: oxidoreductase Chain: A: PDB Molecule: ferredoxin component of carbazole 1,9a- PDBTitle: ferredoxin of carbazole 1,9a-dioxygenase from nocardiodides2 aromaticivorans ic177
						Fold: SMAD/FHA domain

29	d1dd1a_	Alignment	not modelled	9.9	38	Superfamily: SMAD/FHA domain Family: SMAD domain
30	d1mj5a_	Alignment	not modelled	9.9	57	Fold: SMAD/FHA domain Superfamily: SMAD/FHA domain Family: SMAD domain
31	d3cx5e1	Alignment	not modelled	9.9	33	Fold: ISP domain Superfamily: ISP domain Family: Rieske iron-sulfur protein (ISP)
32	d1khua_	Alignment	not modelled	9.7	43	Fold: SMAD/FHA domain Superfamily: SMAD/FHA domain Family: SMAD domain
33	c2yvxD_	Alignment	not modelled	9.5	16	PDB header: transport protein Chain: D: PDB Molecule: mg2+ transporter mgte; PDBTitle: crystal structure of magnesium transporter mgte
34	d1g2ha_	Alignment	not modelled	9.4	35	Fold: DNA/RNA-binding 3-helical bundle Superfamily: Homeodomain-like Family: FIS-like
35	c3ik5A_	Alignment	not modelled	9.3	29	PDB header: viral protein/signaling protein Chain: A: PDB Molecule: protein nef; PDBTitle: sivmac239 nef in complex with tcr zeta itam 1 polypeptide (a63-r80)
36	c2e76D_	Alignment	not modelled	9.2	25	PDB header: photosynthesis Chain: D: PDB Molecule: cytochrome b6-f complex iron-sulfur subunit; PDBTitle: crystal structure of the cytochrome b6f complex with tridecyl-2 stigmatellin (tds) from m.laminosus
37	d1fqta_	Alignment	not modelled	9.0	21	Fold: ISP domain Superfamily: ISP domain Family: Rieske iron-sulfur protein (ISP)
38	d1nyka_	Alignment	not modelled	9.0	36	Fold: ISP domain Superfamily: ISP domain Family: Rieske iron-sulfur protein (ISP)
39	d1ygsa_	Alignment	not modelled	8.9	38	Fold: SMAD/FHA domain Superfamily: SMAD/FHA domain Family: SMAD domain
40	c2krhA_	Alignment	not modelled	8.9	27	PDB header: actin-binding protein Chain: A: PDB Molecule: actin-binding rho-activating protein; PDBTitle: structure of the c-terminal actin binding domain of abra
41	d1k1xa2	Alignment	not modelled	8.7	36	Fold: Supersandwich Superfamily: Galactose mutarotase-like Family: 4-alpha-glucanotransferase, C-terminal domain
42	d1vm9a_	Alignment	not modelled	8.6	21	Fold: ISP domain Superfamily: ISP domain Family: Rieske iron-sulfur protein (ISP)
43	c3dinF_	Alignment	not modelled	8.4	15	PDB header: membrane protein, protein transport Chain: F: PDB Molecule: preprotein translocase subunit secy; PDBTitle: crystal structure of the protein-translocation complex formed by the2 secy channel and the seca atpase
44	d1l0nk_	Alignment	not modelled	8.4	15	Fold: Single transmembrane helix Superfamily: Subunit XI (6.4 kDa protein) of cytochrome bc1 complex (Ubiquinol-cytochrome c reductase) Family: Subunit XI (6.4 kDa protein) of cytochrome bc1 complex (Ubiquinol-cytochrome c reductase)
45	c2i7fB_	Alignment	not modelled	8.0	21	PDB header: oxidoreductase Chain: B: PDB Molecule: ferredoxin component of dioxygenase; PDBTitle: sphingomonas yanoikuyae b1 ferredoxin
46	c2i7kA_	Alignment	not modelled	7.9	13	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: solution nmr structure of protein cd1104.2 from clostridium difficile,2 northeast structural genomics consortium target cfr130
47	d1rfsa_	Alignment	not modelled	7.8	15	Fold: ISP domain Superfamily: ISP domain Family: Rieske iron-sulfur protein (ISP)
48	c1khxA_	Alignment	not modelled	7.8	50	PDB header: transcription Chain: A: PDB Molecule: smad2; PDBTitle: crystal structure of a phosphorylated smad2
49	d1khxa_	Alignment	not modelled	7.8	50	Fold: SMAD/FHA domain Superfamily: SMAD/FHA domain Family: SMAD domain
50	c2de7E_	Alignment	not modelled	7.5	14	PDB header: oxidoreductase Chain: E: PDB Molecule: ferredoxin component of carbazole; PDBTitle: the substrate-bound complex between oxygenase and2 ferredoxin in carbazole 1,9a-dioxygenase
51	d1nvpd1	Alignment	not modelled	7.5	11	Fold: Transcription factor IIA (TFIIA), alpha-helical domain Superfamily: Transcription factor IIA (TFIIA), alpha-helical domain Family: Transcription factor IIA (TFIIA), alpha-helical domain
52	c3ljka_	Alignment	not modelled	7.4	44	PDB header: isomerase Chain: A: PDB Molecule: glucose-6-phosphate isomerase; PDBTitle: glucose-6-phosphate isomerase from francisella tularensis.
53	c2qpzA_	Alignment	not modelled	7.4	14	PDB header: metal binding protein Chain: A: PDB Molecule: naphthalene 1,2-dioxygenase system ferredoxin PDBTitle: naphthalene 1,2-dioxygenase rieske ferredoxin
54	d1nh2d1	Alignment	not modelled	7.4	11	Fold: Transcription factor IIA (TFIIA), alpha-helical domain Superfamily: Transcription factor IIA (TFIIA), alpha-helical domain Family: Transcription factor IIA (TFIIA), alpha-helical domain
55	d2jo6a1	Alignment	not modelled	7.3	7	Fold: ISP domain Superfamily: ISP domain

						Family: NirD-like
56	c2jopA	Alignment	not modelled	7.2	40	PDB header: immune system Chain: A: PDB Molecule: t-cell surface glycoprotein cd5; PDBTitle: solution structure of the n-terminal extracellular domain2 of the lymphocyte receptor cd5 (cd5 domain 1)
57	d1vi7a2	Alignment	not modelled	7.2	18	Fold: Ferredoxin-like Superfamily: EF-G C-terminal domain-like Family: YigZ C-terminal domain-like
58	d2raqa1	Alignment	not modelled	7.1	28	Fold: Ferredoxin-like Superfamily: MTH889-like Family: MTH889-like
59	c2lafA	Alignment	not modelled	7.1	7	PDB header: membrane protein Chain: A: PDB Molecule: lipoprotein 34; PDBTitle: nmr solution structure of the n-terminal domain of the e. coli2 lipoprotein bamc
60	c1qdnA	Alignment	not modelled	7.1	13	PDB header: fusion protein Chain: A: PDB Molecule: protein (n-ethylmaleimide sensitive fusion PDBTitle: amino terminal domain of the n-ethylmaleimide sensitive2 fusion protein (nsf)
61	d3bpdA1	Alignment	not modelled	7.0	28	Fold: Ferredoxin-like Superfamily: MTH889-like Family: MTH889-like
62	d2de6a1	Alignment	not modelled	6.9	36	Fold: ISP domain Superfamily: ISP domain Family: Ring hydroxylating alpha subunit ISP domain
63	c3cvfA	Alignment	not modelled	6.9	25	PDB header: signaling protein Chain: A: PDB Molecule: homer protein homolog 3; PDBTitle: crystal structure of the carboxy terminus of homer3
64	c2vjjA	Alignment	not modelled	6.9	43	PDB header: viral protein Chain: A: PDB Molecule: tailspike protein; PDBTitle: tailspike protein of e.coli bacteriophage hk620 in complex2 with hexasaccharide
65	c3fmtF	Alignment	not modelled	6.9	19	PDB header: replication inhibitor/dna Chain: F: PDB Molecule: protein seqa; PDBTitle: crystal structure of seqa bound to dna
66	c2x3dC	Alignment	not modelled	6.8	22	PDB header: unknown function Chain: C: PDB Molecule: sso6206; PDBTitle: crystal structure of sso6206 from sulfolobus solfataricus p2
67	c3d89A	Alignment	not modelled	6.7	14	PDB header: electron transport Chain: A: PDB Molecule: rieske domain-containing protein; PDBTitle: crystal structure of a soluble rieske ferredoxin from mus musculus
68	c1nvpD	Alignment	not modelled	6.6	11	PDB header: transcription/dna Chain: D: PDB Molecule: transcription initiation factor iia gamma chain; PDBTitle: human tfiia/tbp/dna complex
69	d1xgsa1	Alignment	not modelled	6.6	18	Fold: DNA/RNA-binding 3-helical bundle Superfamily: "Winged helix" DNA-binding domain Family: Methionine aminopeptidase, insert domain
70	c3j01A	Alignment	not modelled	6.3	12	PDB header: ribosome/ribosomal protein Chain: A: PDB Molecule: preprotein translocase secy subunit; PDBTitle: structure of the ribosome-secy complex in the membrane environment
71	d2nsfa2	Alignment	not modelled	6.3	57	Fold: SCP-like Superfamily: SCP-like Family: Micthiol-dependent maleylpyruvate isomerase C-terminal domain-like
72	c2l2oA	Alignment	not modelled	6.3	33	PDB header: unknown function Chain: A: PDB Molecule: upf0727 protein c6orf115; PDBTitle: solution structure of human hspc280 protein
73	c3nuhB	Alignment	not modelled	6.2	22	PDB header: isomerase Chain: B: PDB Molecule: dna gyrase subunit b; PDBTitle: a domain insertion in e. coli gyrb adopts a novel fold that plays a2 critical role in gyrase function
74	d3c0da1	Alignment	not modelled	6.1	7	Fold: ISP domain Superfamily: ISP domain Family: NirD-like
75	c2eqfA	Alignment	not modelled	6.0	23	PDB header: hydrolase Chain: A: PDB Molecule: tumor necrosis factor, alpha-induced protein 3; PDBTitle: solution structure of the 7th a20-type zinc finger domain2 from human tumor necrosis factor, alpha-induced protein3
76	c1nh2D	Alignment	not modelled	6.0	11	PDB header: transcription/dna Chain: D: PDB Molecule: transcription initiation factor iia small chain; PDBTitle: crystal structure of a yeast tfiia/tbp/dna complex
77	d2z15a1	Alignment	not modelled	5.9	33	Fold: BTG domain-like Superfamily: BTG domain-like Family: BTG domain-like
78	d2e74d1	Alignment	not modelled	5.9	23	Fold: ISP domain Superfamily: ISP domain Family: Rieske iron-sulfur protein (ISP)
79	d2bmoa1	Alignment	not modelled	5.9	33	Fold: ISP domain Superfamily: ISP domain Family: Ring hydroxylating alpha subunit ISP domain
80	c3chxG	Alignment	not modelled	5.8	20	PDB header: membrane protein Chain: G: PDB Molecule: pmoc; PDBTitle: crystal structure of methylosinus trichosporium ob3b2 particulate methane monooxygenase (pmmo)
81	d1z01a1	Alignment	not modelled	5.8	14	Fold: ISP domain Superfamily: ISP domain Family: Ring hydroxylating alpha subunit ISP domain

82	c2kc7A_	Alignment	not modelled	5.8	21	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: bfr218_protein; PDBTitle: solution nmr structure of bacteroides fragilis protein2 bfr1650. northeast structural genomics consortium target3 bfr218
83	c1yewC_	Alignment	not modelled	5.7	17	PDB header: oxidoreductase, membrane protein Chain: C: PDB Molecule: particulate methane monooxygenase subunit c2; PDBTitle: crystal structure of particulate methane monooxygenase
84	d1qk7a_	Alignment	not modelled	5.7	44	Fold: Knottins (small inhibitors, toxins, lectins) Superfamily: omega toxin-like Family: Spider toxins
85	d1g8kb_	Alignment	not modelled	5.5	14	Fold: ISP domain Superfamily: ISP domain Family: Rieske iron-sulfur protein (ISP)
86	d1wglA_	Alignment	not modelled	5.5	14	Fold: RuvA C-terminal domain-like Superfamily: UBA-like Family: CUE domain
87	d1j97a_	Alignment	not modelled	5.4	19	Fold: HAD-like Superfamily: HAD-like Family: Phosphoserine phosphatase
88	d2b1xa1	Alignment	not modelled	5.4	25	Fold: ISP domain Superfamily: ISP domain Family: Ring hydroxylating alpha subunit ISP domain
89	d3e9va1	Alignment	not modelled	5.4	33	Fold: BTG domain-like Superfamily: BTG domain-like Family: BTG domain-like
90	c2w7zB_	Alignment	not modelled	5.4	39	PDB header: inhibitor Chain: B: PDB Molecule: pentapeptide repeat family protein; PDBTitle: structure of the pentapeptide repeat protein efsqnr, a dna2 gyrase inhibitor. free amines modified by cyclc3 pentylation with glutaraldehyde.
91	c3bu8B_	Alignment	not modelled	5.3	8	PDB header: dna binding protein Chain: B: PDB Molecule: telomeric repeat-binding factor 2; PDBTitle: crystal structure of trf2 trfh domain and tin2 peptide2 complex
92	d1j2ga2	Alignment	not modelled	5.2	44	Fold: T-fold Superfamily: Tetrahydrobiopterin biosynthesis enzymes-like Family: Urate oxidase (uricase)
93	c2x7aB_	Alignment	not modelled	5.2	16	PDB header: immune system Chain: B: PDB Molecule: bone marrow stromal antigen 2; PDBTitle: structural basis of hiv-1 tethering to membranes by the2 bst2-tetherin ectodomain
94	d1q90c_	Alignment	not modelled	5.2	15	Fold: ISP domain Superfamily: ISP domain Family: Rieske iron-sulfur protein (ISP)
95	d2yzca2	Alignment	not modelled	5.1	44	Fold: T-fold Superfamily: Tetrahydrobiopterin biosynthesis enzymes-like Family: Urate oxidase (uricase)
96	d1mb6a_	Alignment	not modelled	5.1	43	Fold: Knottins (small inhibitors, toxins, lectins) Superfamily: omega toxin-like Family: Spider toxins
97	c2avpA_	Alignment	not modelled	5.0	4	PDB header: de novo protein Chain: A: PDB Molecule: synthetic consensus tpr protein; PDBTitle: crystal structure of an 8 repeat consensus tpr superhelix
98	c2k4fA_	Alignment	not modelled	5.0	25	PDB header: immune system, signaling protein Chain: A: PDB Molecule: t-cell surface glycoprotein cd3 epsilon chain; PDBTitle: mouse cd3epsilon cytoplasmic tail
99	d1a7ge_	Alignment	not modelled	5.0	21	Fold: Ferredoxin-like Superfamily: Viral DNA-binding domain Family: Viral DNA-binding domain