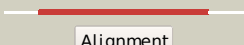

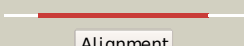

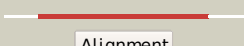

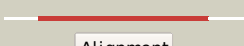


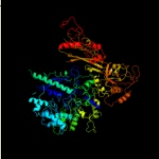






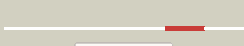
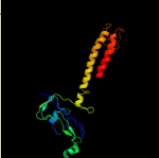





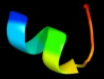









Phyre2

Email	I.a.kelley@imperial.ac.uk
Description	P47768
Date	Tue Jul 17 17:05:10 BST 2012
Unique Job ID	a484637e4f5d2acd

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	d1smyc_	 Alignment		100.0	54	Fold: beta and beta-prime subunits of DNA dependent RNA-polymerase Superfamily: beta and beta-prime subunits of DNA dependent RNA-polymerase Family: RNA-polymerase beta
2	c3iydC_	 Alignment		100.0	58	PDB header: transcription/dna Chain: C: PDB Molecule: dna-directed rna polymerase subunit beta; PDBTitle: three-dimensional em structure of an intact activator-dependent2 transcription initiation complex
3	d1ynjc1	 Alignment		100.0	55	Fold: beta and beta-prime subunits of DNA dependent RNA-polymerase Superfamily: beta and beta-prime subunits of DNA dependent RNA-polymerase Family: RNA-polymerase beta
4	c2pmzB_	 Alignment		100.0	29	PDB header: translation, transferase Chain: B: PDB Molecule: dna-directed rna polymerase subunit b; PDBTitle: archaeal rna polymerase from sulfolobus solfataricus
5	c3h0gN_	 Alignment		100.0	26	PDB header: transcription Chain: N: PDB Molecule: dna-directed rna polymerase ii subunit rpb2; PDBTitle: rna polymerase ii from schizosaccharomyces pombe
6	d1twfb_	 Alignment		100.0	25	Fold: beta and beta-prime subunits of DNA dependent RNA-polymerase Superfamily: beta and beta-prime subunits of DNA dependent RNA-polymerase Family: RNA-polymerase beta
7	c3mlqD_	 Alignment		100.0	62	PDB header: transferase/transcription Chain: D: PDB Molecule: dna-directed rna polymerase subunit beta; PDBTitle: crystal structure of the thermus thermophilus transcription-repair2 coupling factor rna polymerase interacting domain with the thermus3 aquaticus rna polymerase beta1 domain
8	c3mlqB_	 Alignment		100.0	63	PDB header: transferase/transcription Chain: B: PDB Molecule: dna-directed rna polymerase subunit beta; PDBTitle: crystal structure of the thermus thermophilus transcription-repair2 coupling factor rna polymerase interacting domain with the thermus3 aquaticus rna polymerase beta1 domain
9	c3tbiB_	 Alignment		99.9	44	PDB header: transcription Chain: B: PDB Molecule: dna-directed rna polymerase subunit beta; PDBTitle: crystal structure of t4 gp33 bound to e. coli rnap beta-flap domain
10	c3ltiA_	 Alignment		99.9	60	PDB header: transferase Chain: A: PDB Molecule: dna-directed rna polymerase subunit beta; PDBTitle: crystal structure of the escherichia coli rna polymerase beta subunit2 beta2-beta1 domains
11	c3qqcA_	 Alignment		99.2	24	PDB header: transcription Chain: A: PDB Molecule: dna-directed rna polymerase subunit b, dna-directed rna PDBTitle: crystal structure of archaeal spt4/5 bound to the rnap clamp domain

12	dlr46a1	Alignment		47.4	16	Fold: Glycosyl hydrolase domain Superfamily: Glycosyl hydrolase domain Family: alpha-Amylases, C-terminal beta-sheet domain
13	dlzqlc1	Alignment		36.0	42	Fold: GatB/YqeY motif Superfamily: GatB/YqeY motif Family: GatB/GatE C-terminal domain-like
14	din26a2	Alignment		31.4	19	Fold: Immunoglobulin-like beta-sandwich Superfamily: Fibronectin type III Family: Fibronectin type III
15	dld02a_	Alignment		30.3	17	Fold: Restriction endonuclease-like Superfamily: Restriction endonuclease-like Family: Restriction endonuclease MunI
16	dinbwa1	Alignment		27.4	14	Fold: The "swivelling" beta/beta/alpha domain Superfamily: Swiveling domain of dehydratase reactivase alpha subunit Family: Swiveling domain of dehydratase reactivase alpha subunit
17	dluj4a2	Alignment		27.3	24	Fold: Ferredoxin-like Superfamily: D-ribose-5-phosphate isomerase (RpiA), lid domain Family: D-ribose-5-phosphate isomerase (RpiA), lid domain
18	c2gtiA_	Alignment		26.9	16	PDB header: viral protein Chain: A: PDB Molecule: replicase polyprotein 1ab; PDBTitle: mutation of mhv coronavirus non-structural protein nsp15 (f3071)
19	d1gm5a4	Alignment		23.9	20	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Tandem AAA-ATPase domain
20	c1uj6A_	Alignment		23.2	15	PDB header: isomerase Chain: A: PDB Molecule: ribose 5-phosphate isomerase; PDBTitle: crystal structure of thermophilus thermophilus ribose-5-phosphate isomerase2 complexed with arabinose-5-phosphate
21	d2d0oa1	Alignment	not modelled	21.9	13	Fold: The "swivelling" beta/beta/alpha domain Superfamily: Swiveling domain of dehydratase reactivase alpha subunit Family: Swiveling domain of dehydratase reactivase alpha subunit
22	c3lwwA_	Alignment	not modelled	21.4	12	PDB header: ligase Chain: A: PDB Molecule: glutamate--cysteine ligase; PDBTitle: glutathione-inhibited scgcl
23	c3mjhD_	Alignment	not modelled	21.4	50	PDB header: protein transport Chain: D: PDB Molecule: early endosome antigen 1; PDBTitle: crystal structure of human rab5a in complex with the c2h2 zinc finger2 of eea1
24	c3kdeC_	Alignment	not modelled	21.2	16	PDB header: dna binding protein/dna Chain: C: PDB Molecule: transposable element p transposase; PDBTitle: crystal structure of the thap domain from d. melanogaster p-element2 transposase in complex with its natural dna binding site
25	d1lk5a2	Alignment	not modelled	21.2	12	Fold: Ferredoxin-like Superfamily: D-ribose-5-phosphate isomerase (RpiA), lid domain Family: D-ribose-5-phosphate isomerase (RpiA), lid domain
26	c3cwiA_	Alignment	not modelled	21.1	22	PDB header: biosynthetic protein Chain: A: PDB Molecule: thiamine-biosynthesis protein this; PDBTitle: crystal structure of thiamine biosynthesis protein (this)2 from geobacter metallireducens. northeast structural3 genomics consortium target gmr137
27	c2c2ID_	Alignment	not modelled	20.6	24	PDB header: chaperone Chain: D: PDB Molecule: carboxy terminus of hsp70-interacting protein; PDBTitle: crystal structure of the chip u-box e3 ubiquitin ligase
28	d1y4oa1	Alignment	not modelled	20.0	47	Fold: Profilin-like Superfamily: Roadblock/LC7 domain Family: Roadblock/LC7 domain

29	d1ujpa_	Alignment	not modelled	19.8	26	Fold: TIM beta/alpha-barrel Superfamily: Ribulose-phosphate binding barrel Family: Tryptophan biosynthesis enzymes
30	c2db3D_	Alignment	not modelled	19.8	43	PDB header: hydrolase/rna Chain: D: PDB Molecule: atp-dependent rna helicase vasa; PDBTitle: structural basis for rna unwinding by the dead-box protein2 drosophila vasa
31	d2eyqa5	Alignment	not modelled	19.4	16	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Tandem AAA-ATPase domain
32	c2q8nB_	Alignment	not modelled	19.0	18	PDB header: isomerase Chain: B: PDB Molecule: glucose-6-phosphate isomerase; PDBTitle: crystal structure of glucose-6-phosphate isomerase (ec2 5.3.1.9) (tm1385) from thermotoga maritima at 1.82 a3 resolution
33	c1nbwA_	Alignment	not modelled	18.6	16	PDB header: hydrolase Chain: A: PDB Molecule: glycerol dehydratase reactivase alpha subunit; PDBTitle: glycerol dehydratase reactivase
34	d1bjba1	Alignment	not modelled	18.2	13	Fold: Immunoglobulin-like beta-sandwich Superfamily: Immunoglobulin Family: I set domains
35	c2pjmA_	Alignment	not modelled	17.7	21	PDB header: isomerase Chain: A: PDB Molecule: ribose-5-phosphate isomerase a; PDBTitle: structure of ribose 5-phosphate isomerase a from2 methanocaldococcus jannaschii
36	d1xiwb_	Alignment	not modelled	16.9	13	Fold: Immunoglobulin-like beta-sandwich Superfamily: Immunoglobulin Family: I set domains
37	d1cf2o2	Alignment	not modelled	16.6	34	Fold: FwdE/GAPDH domain-like Superfamily: Glyceraldehyde-3-phosphate dehydrogenase-like, C-terminal domain Family: GAPDH-like
38	d1zcea1	Alignment	not modelled	16.6	17	Fold: PUA domain-like Superfamily: PUA domain-like Family: Atu2648/PH1033-like
39	d1prtc1	Alignment	not modelled	15.8	19	Fold: OB-fold Superfamily: Bacterial enterotoxins Family: Bacterial AB5 toxins, B-subunits
40	d1prtb1	Alignment	not modelled	15.5	19	Fold: OB-fold Superfamily: Bacterial enterotoxins Family: Bacterial AB5 toxins, B-subunits
41	c2fyuE_	Alignment	not modelled	15.5	43	PDB header: oxidoreductase Chain: E: PDB Molecule: ubiquinol-cytochrome c reductase iron-sulfur subunit, PDBTitle: crystal structure of bovine heart mitochondrial bc1 with jg1442 inhibitor
42	d1sy6a1	Alignment	not modelled	15.5	13	Fold: Immunoglobulin-like beta-sandwich Superfamily: Immunoglobulin Family: I set domains
43	c3l7oB_	Alignment	not modelled	15.4	15	PDB header: isomerase Chain: B: PDB Molecule: ribose-5-phosphate isomerase a; PDBTitle: crystal structure of ribose-5-phosphate isomerase a from streptococcus2 mutans ua159
44	c2g5iB_	Alignment	not modelled	14.9	17	PDB header: ligase Chain: B: PDB Molecule: aspartyl/glutamyl-trna(asn/gln) amidotransferase PDBTitle: structure of trna-dependent amidotransferase gatcab2 complexed with adp-alf4
45	d1xmwa2	Alignment	not modelled	14.8	13	Fold: Immunoglobulin-like beta-sandwich Superfamily: Immunoglobulin Family: I set domains
46	c1bcpH_	Alignment	not modelled	13.7	19	PDB header: toxin Chain: H: PDB Molecule: pertussis toxin; PDBTitle: binary complex of pertussis toxin and atp
47	c3bxzA_	Alignment	not modelled	13.2	33	PDB header: transport protein Chain: A: PDB Molecule: preprotein translocase subunit seca; PDBTitle: crystal structure of the isolated dead motor domains from2 escherichia coli seca
48	d1m5ha1	Alignment	not modelled	12.4	42	Fold: Ferredoxin-like Superfamily: Formylmethanofuran:tetrahydromethanopterin formyltransferase Family: Formylmethanofuran:tetrahydromethanopterin formyltransferase
49	d1tf5a4	Alignment	not modelled	12.2	33	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Tandem AAA-ATPase domain
50	d1m0sa2	Alignment	not modelled	12.2	19	Fold: Ferredoxin-like Superfamily: D-ribose-5-phosphate isomerase (RpiA), lid domain Family: D-ribose-5-phosphate isomerase (RpiA), lid domain
51	d1m5sa1	Alignment	not modelled	12.1	42	Fold: Ferredoxin-like Superfamily: Formylmethanofuran:tetrahydromethanopterin formyltransferase Family: Formylmethanofuran:tetrahydromethanopterin formyltransferase
52	d1ftra1	Alignment	not modelled	12.1	46	Fold: Ferredoxin-like Superfamily: Formylmethanofuran:tetrahydromethanopterin formyltransferase Family: Formylmethanofuran:tetrahydromethanopterin formyltransferase
53	c2uv0G_	Alignment	not modelled	12.0	25	PDB header: transcription Chain: G: PDB Molecule: transcriptional activator protein lasr; PDBTitle: structure of the p. aeruginosa lasr ligand-binding domain2 bound to its autoinducer

54	d2d6fc2	Alignment	not modelled	11.8	46	Fold: DCoH-like Superfamily: GAD domain-like Family: GAD domain
55	c3c4iA	Alignment	not modelled	11.8	13	PDB header: dna binding protein Chain: A: PDB Molecule: dna-binding protein hu homolog; PDBTitle: crystal structure analysis of n terminal region containing the2 dimerization domain and dna binding domain of hu protein(histone like3 protein-dna binding) from mycobacterium tuberculosis [h37rv]
56	c1gjjA	Alignment	not modelled	11.6	33	PDB header: membrane protein Chain: A: PDB Molecule: lap2; PDBTitle: n-terminal constant region of the nuclear envelope protein2 lap2
57	d1dcza	Alignment	not modelled	11.5	33	Fold: Barrel-sandwich hybrid Superfamily: Single hybrid motif Family: Biotinyl/lipoyl-carrier proteins and domains
58	c3u5cl	Alignment	not modelled	11.3	22	PDB header: ribosome Chain: I: PDB Molecule: 40s ribosomal protein s8-a; PDBTitle: the structure of the eukaryotic ribosome at 3.0 a resolution. this2 entry contains proteins of the 40s subunit, ribosome a
59	c1pd7B	Alignment	not modelled	11.0	60	PDB header: transcription Chain: B: PDB Molecule: mad1; PDBTitle: extended sid of mad1 bound to the pah2 domain of msin3b
60	d2gtia2	Alignment	not modelled	10.8	10	Fold: EndoU-like Superfamily: EndoU-like Family: Nsp15 C-terminal domain-like
61	c3dlaD	Alignment	not modelled	10.5	14	PDB header: ligase Chain: D: PDB Molecule: glutamine-dependent nad(+)-synthetase; PDBTitle: x-ray crystal structure of glutamine-dependent nad+ synthetase from2 mycobacterium tuberculosis bound to naad+ and don
62	c1bjbA	Alignment	not modelled	10.4	18	PDB header: immune system Chain: A: PDB Molecule: cd3 epsilon and gamma ectodomain fragment PDBTitle: cd3 epsilon and gamma ectodomain fragment complex in single-2 chain construct
63	c6paxA	Alignment	not modelled	10.4	22	PDB header: gene regulation/dna Chain: A: PDB Molecule: homeobox protein pax-6; PDBTitle: crystal structure of the human pax-6 paired domain-dna2 complex reveals a general model for pax protein-dna3 interactions
64	c2vb0A	Alignment	not modelled	10.1	21	PDB header: hydrolase Chain: A: PDB Molecule: polyprotein 3bcd; PDBTitle: crystal structure of coxsackievirus b3 proteinase 3c
65	d1flja	Alignment	not modelled	9.8	25	Fold: Carbonic anhydrase Superfamily: Carbonic anhydrase Family: Carbonic anhydrase
66	c1k5C	Alignment	not modelled	9.8	14	PDB header: isomerase Chain: C: PDB Molecule: d-ribose-5-phosphate isomerase; PDBTitle: structure of the d-ribose-5-phosphate isomerase from2 pyrococcus horikoshii
67	c3qp1A	Alignment	not modelled	9.7	30	PDB header: transcription Chain: A: PDB Molecule: cvir transcriptional regulator; PDBTitle: crystal structure of cvir ligand-binding domain bound to the native2 ligand c6-hsl
68	d1aola	Alignment	not modelled	9.7	23	Fold: ENV polyprotein, receptor-binding domain Superfamily: ENV polyprotein, receptor-binding domain Family: ENV polyprotein, receptor-binding domain
69	c1mljA	Alignment	not modelled	9.7	50	PDB header: blood clotting Chain: A: PDB Molecule: fibrinogen alpha subunit; PDBTitle: crystal structure of native chicken fibrinogen with two different2 bound ligands
70	d1o8ba2	Alignment	not modelled	9.5	19	Fold: Ferredoxin-like Superfamily: D-ribose-5-phosphate isomerase (RpiA), lid domain Family: D-ribose-5-phosphate isomerase (RpiA), lid domain
71	c2f1mA	Alignment	not modelled	9.4	20	PDB header: transport protein Chain: A: PDB Molecule: acriflavine resistance protein a; PDBTitle: conformational flexibility in the multidrug efflux system protein acra
72	c2nu9E	Alignment	not modelled	9.3	21	PDB header: ligase Chain: E: PDB Molecule: succinyl-coa synthetase beta chain; PDBTitle: c123at mutant of e. coli succinyl-coa synthetase2 orthorhombic crystal form
73	d1wgma	Alignment	not modelled	9.2	11	Fold: RING/U-box Superfamily: RING/U-box Family: U-box
74	d1px5a1	Alignment	not modelled	9.1	28	Fold: PAP/OAS1 substrate-binding domain Superfamily: PAP/OAS1 substrate-binding domain Family: 2'-5'-oligoadenylate synthetase 1, OAS1, second domain
75	d2f3na1	Alignment	not modelled	9.1	13	Fold: SAM domain-like Superfamily: SAM/Pointed domain Family: SAM (sterile alpha motif) domain
76	d1b7go2	Alignment	not modelled	9.0	23	Fold: FwdE/GAPDH domain-like Superfamily: Glyceraldehyde-3-phosphate dehydrogenase-like, C-terminal domain Family: GAPDH-like
77	c2p5zX	Alignment	not modelled	8.9	17	PDB header: structural genomics, unknown function Chain: X: PDB Molecule: type vi secretion system component; PDBTitle: the e. coli c3393 protein is a component of the type vi secretion2 system and exhibits structural similarity to t4 bacteriophage tail3 proteins gp27 and gp5
78	d1y5ic1	Alignment	not modelled	8.9	15	Fold: Heme-binding four-helical bundle Superfamily: Respiratory nitrate reductase 1 gamma chain Family: Respiratory nitrate reductase 1 gamma chain

79	c2oy7A_	Alignment	not modelled	8.8	11	PDB header: membrane protein Chain: A: PDB Molecule: outer surface protein a; PDBTitle: the crystal structure of ospa mutant
80	d2hz5a1	Alignment	not modelled	8.8	47	Fold: Profilin-like Superfamily: Roadblock/LC7 domain Family: Roadblock/LC7 domain
81	d1jqna_	Alignment	not modelled	8.7	44	Fold: TIM beta/alpha-barrel Superfamily: Phosphoenolpyruvate/pyruvate domain Family: Phosphoenolpyruvate carboxylase
82	d2p5zx2	Alignment	not modelled	8.6	17	Fold: Phage tail proteins Superfamily: Phage tail proteins Family: Baseplate protein-like
83	d2pxyd2	Alignment	not modelled	8.6	44	Fold: MHC antigen-recognition domain Superfamily: MHC antigen-recognition domain Family: MHC antigen-recognition domain
84	d1h59b_	Alignment	not modelled	8.5	38	Fold: Knottins (small inhibitors, toxins, lectins) Superfamily: Growth factor receptor domain Family: Growth factor receptor domain
85	d2guja1	Alignment	not modelled	8.5	25	Fold: Phage tail proteins Superfamily: Phage tail proteins Family: XkdM-like
86	c1m0sA_	Alignment	not modelled	8.5	16	PDB header: isomerase Chain: A: PDB Molecule: ribose-5-phosphate isomerase a; PDBTitle: northeast structural genomics consortium (nesg id ir21)
87	c2j8qB_	Alignment	not modelled	8.5	40	PDB header: nuclear protein Chain: B: PDB Molecule: cleavage and polyadenylation specificity factor 5; PDBTitle: crystal structure of human cleavage and polyadenylation2 specificity factor 5 (cpsf5) in complex with a sulphate3 ion.
88	c1kzB_	Alignment	not modelled	8.3	14	PDB header: isomerase Chain: B: PDB Molecule: ribose 5-phosphate isomerase a; PDBTitle: crystal structure of d-ribose-5-phosphate isomerase (rpiA)2 from escherichia coli.
89	c3ghgD_	Alignment	not modelled	8.3	33	PDB header: blood clotting Chain: D: PDB Molecule: fibrinogen alpha chain; PDBTitle: crystal structure of human fibrinogen
90	d2pwwa1	Alignment	not modelled	8.3	8	Fold: TBP-like Superfamily: YugN-like Family: YugN-like
91	d1m6ia3	Alignment	not modelled	8.2	43	Fold: CO dehydrogenase flavoprotein C-domain-like Superfamily: FAD/NAD-linked reductases, dimerisation (C-terminal) domain Family: FAD/NAD-linked reductases, dimerisation (C-terminal) domain
92	c2aujD_	Alignment	not modelled	8.1	33	PDB header: transferase Chain: D: PDB Molecule: dna-directed rna polymerase beta' chain; PDBTitle: structure of thermus aquaticus rna polymerase beta'-subunit2 insert
93	d1ooha_	Alignment	not modelled	8.1	33	Fold: EF Hand-like Superfamily: Insect pheromone/odorant-binding proteins Family: Insect pheromone/odorant-binding proteins
94	d1pfva2	Alignment	not modelled	8.0	40	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidylyl transferase Family: Class I aminoacyl-tRNA synthetases (RS), catalytic domain
95	d1ulia1	Alignment	not modelled	8.0	29	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Glyceraldehyde-3-phosphate dehydrogenase-like, N-terminal domain
96	d1k8ba_	Alignment	not modelled	8.0	36	Fold: Ribosome binding domain-like Superfamily: Translation initiation factor 2 beta, aIF2beta, N-terminal domain Family: Translation initiation factor 2 beta, aIF2beta, N-terminal domain
97	c1p84E_	Alignment	not modelled	8.0	43	PDB header: oxidoreductase Chain: E: PDB Molecule: ubiquinol-cytochrome c reductase iron-sulfur PDBTitle: hdbt inhibited yeast cytochrome bc1 complex
98	c2kkpA_	Alignment	not modelled	8.0	36	PDB header: dna binding protein Chain: A: PDB Molecule: phage integrase; PDBTitle: solution nmr structure of the phage integrase sam-like2 domain from moth 1796 from moorella thermoacetica.3 northeast structural genomics consortium target mtr39k4 (residues 64-171).
99	d1uoua3	Alignment	not modelled	7.9	16	Fold: alpha/beta-Hammerhead Superfamily: Pyrimidine nucleoside phosphorylase C-terminal domain Family: Pyrimidine nucleoside phosphorylase C-terminal domain