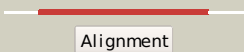

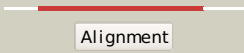







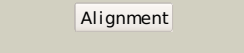

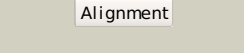

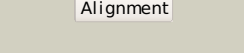



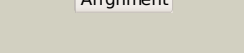

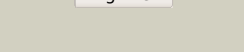
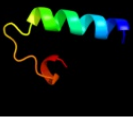
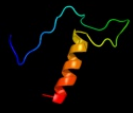










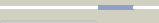


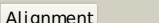
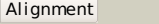
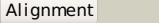
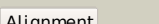
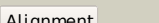
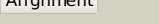
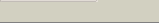



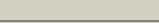





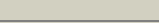
Phyre2

Email	l.a.kelley@imperial.ac.uk
Description	P76216
Date	Thu Jan 5 12:20:40 GMT 2012
Unique Job ID	5d0247ce2fe6dce9

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	dlynha1	 Alignment		100.0	100	Fold: Pentain, beta/alpha-propeller Superfamily: Pentain Family: Succinylarginine dihydrolase-like
2	d1h70a_	 Alignment		97.0	19	Fold: Pentain, beta/alpha-propeller Superfamily: Pentain Family: Dimethylarginine dimethylaminohydrolase DDAH
3	d1bwda_	 Alignment		90.3	12	Fold: Pentain, beta/alpha-propeller Superfamily: Pentain Family: Amidinotransferase
4	c3dydB_	 Alignment		81.8	18	PDB header: transferase Chain: B: PDB Molecule: tyrosine aminotransferase; PDBTitle: human tyrosine aminotransferase
5	d1jdwa_	 Alignment		76.1	15	Fold: Pentain, beta/alpha-propeller Superfamily: Pentain Family: Amidinotransferase
6	c1jdwA_	 Alignment		76.1	15	PDB header: transferase Chain: A: PDB Molecule: l-arginine\glycine amidinotransferase; PDBTitle: crystal structure and mechanism of l-arginine: glycine2 amidinotransferase: a mitochondrial enzyme involved in3 creatine biosynthesis
7	c2ci6A_	 Alignment		75.9	19	PDB header: hydrolase Chain: A: PDB Molecule: ng, ng-dimethylarginine dimethylaminohydrolase 1; PDBTitle: crystal structure of dimethylarginine2 dimethylaminohydrolase i bound with zinc low ph
8	d1wsta1	 Alignment		66.4	12	Fold: PLP-dependent transferase-like Superfamily: PLP-dependent transferases Family: AAT-like
9	c8jdwA_	 Alignment		64.6	15	PDB header: transferase Chain: A: PDB Molecule: protein (l-arginine:glycine amidinotransferase); PDBTitle: crystal structure of human l-arginine:glycine2 amidinotransferase in complex with l-alanine
10	c3i4aA_	 Alignment		61.2	18	PDB header: hydrolase Chain: A: PDB Molecule: n(g),n(g)-dimethylarginine dimethylaminohydrolase PDBTitle: crystal structure of dimethylarginine2 dimethylaminohydrolase-1 (ddah-1) in complex with n5-(1-3 iminopropyl)-l-ornithine
11	d1bl0a1	 Alignment		53.8	11	Fold: DNA/RNA-binding 3-helical bundle Superfamily: Homeodomain-like Family: AraC type transcriptional activator

12	c3pdxA	Alignment		53.4	19	PDB header: transferase Chain: A: PDB Molecule: tyrosine aminotransferase; PDBTitle: crystal structural of mouse tyrosine aminotransferase
13	d1d5ya1	Alignment		43.5	15	Fold: DNA/RNA-binding 3-helical bundle Superfamily: Homeodomain-like Family: AraC type transcriptional activator
14	c3fkdc	Alignment		41.8	15	PDB header: lyase Chain: C: PDB Molecule: l-threonine-o-3-phosphate decarboxylase; PDBTitle: the crystal structure of l-threonine-o-3-phosphate2 decarboxylase from porphyromonas gingivalis
15	c3p1tB	Alignment		37.3	13	PDB header: transferase Chain: B: PDB Molecule: putative histidinol-phosphate aminotransferase; PDBTitle: crystal structure of a putative aminotransferase (bpsi1724) from2 burkholderia pseudomallei k96243 at 2.60 a resolution
16	c3ctzA	Alignment		36.7	19	PDB header: hydrolase Chain: A: PDB Molecule: xaa-pro aminopeptidase 1; PDBTitle: structure of human cytosolic x-prolyl aminopeptidase
17	d2bo9b1	Alignment		32.8	25	Fold: Cystatin-like Superfamily: Cystatin/monellin Family: Latexin-like
18	c3eibB	Alignment		31.2	12	PDB header: transferase Chain: B: PDB Molecule: ll-diaminopimelate aminotransferase; PDBTitle: crystal structure of k270n variant of ll-diaminopimelate2 aminotransferase from arabidopsis thaliana
19	c3oouA	Alignment		30.0	4	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: lin2118 protein; PDBTitle: the structure of a protein with unkown function from listeria innocua
20	c3mk1B	Alignment		28.6	11	PDB header: transcription regulator Chain: B: PDB Molecule: hth-type transcriptional regulator gadx; PDBTitle: crystal structure of dna-binding transcriptional dual regulator from2 escherichia coli k-12
21	d1rxxa	Alignment	not modelled	28.3	24	Fold: Pentelin, beta/alpha-propeller Superfamily: Pentelin Family: Arginine deiminase
22	d1fg7a	Alignment	not modelled	28.0	30	Fold: PLP-dependent transferase-like Superfamily: PLP-dependent transferases Family: AAT-like
23	c1bl0A	Alignment	not modelled	27.8	12	PDB header: transcription/dna Chain: A: PDB Molecule: protein (multiple antibiotic resistance protein); PDBTitle: multiple antibiotic resistance protein (mara)/dna complex
24	c3tl8D	Alignment	not modelled	26.0	16	PDB header: transferase Chain: D: PDB Molecule: aminotransferase class i and ii; PDBTitle: crystal structure of aminotransferase from anaerococcus prevotii dsm2 20548.
25	c3g7qA	Alignment	not modelled	24.7	12	PDB header: transferase Chain: A: PDB Molecule: valine-pyruvate aminotransferase; PDBTitle: crystal structure of valine-pyruvate aminotransferase avta2 (np_462565.1) from salmonella typhimurium lt2 at 1.80 a resolution
26	c2k9sA	Alignment	not modelled	22.1	15	PDB header: transcription Chain: A: PDB Molecule: arabinose operon regulatory protein; PDBTitle: solution structure of dna binding domain of e. coli arac
27	c2of5K	Alignment	not modelled	21.7	15	PDB header: apoptosis Chain: K: PDB Molecule: leucine-rich repeat and death domain-containing PDBTitle: oligomeric death domain complex
28	c3hdoB	Alignment	not modelled	21.6	19	PDB header: transferase Chain: B: PDB Molecule: histidinol-phosphate aminotransferase; PDBTitle: crystal structure of a histidinol-phosphate

						aminotransferase from2 geobacter metallireducens PDB header: transcription regulator Chain: A: PDB Molecule: transcriptional regulator (arac-type dna-binding domain- PDBTitle: crystal structure of transcriptional regulator (arac-type dna-binding2 domain-containing proteins) from chromobacterium violaceum
29	c3oioA_	 Alignment	not modelled	21.0	11	
30	d2v7fa1	 Alignment	not modelled	19.0	21	Fold: DNA/RNA-binding 3-helical bundle Superfamily: "Winged helix" DNA-binding domain Family: Rps19E-like
31	d2vnud3	 Alignment	not modelled	18.5	33	Fold: OB-fold Superfamily: Nucleic acid-binding proteins Family: Cold shock DNA-binding domain-like
32	c2bo9B_	 Alignment	not modelled	18.4	25	PDB header: hydrolase Chain: B: PDB Molecule: human latexin; PDBTitle: human carboxypeptidase a4 in complex with human latexin.
33	d2foka1	 Alignment	not modelled	18.4	26	Fold: DNA/RNA-binding 3-helical bundle Superfamily: "Winged helix" DNA-binding domain Family: Restriction endonuclease FokI, N-terminal (recognition) domain
34	c3e4wB_	 Alignment	not modelled	17.6	28	PDB header: oxidoreductase Chain: B: PDB Molecule: putative uncharacterized protein; PDBTitle: crystal structure of a 33kda catalase-related protein from2 mycobacterium avium subsp. paratuberculosis. p2(1)2(1)2(1) crystal3 form.
35	c3nzlA_	 Alignment	not modelled	17.4	35	PDB header: transcription Chain: A: PDB Molecule: dna-binding protein satb1; PDBTitle: crystal structure of the n-terminal domain of dna-binding protein2 satb1 from homo sapiens, northeast structural genomics consortium3 target hr4435b
36	c3gbgA_	 Alignment	not modelled	17.3	12	PDB header: transcription regulator Chain: A: PDB Molecule: tcp pilus virulence regulatory protein; PDBTitle: crystal structure of tox from vibrio cholerae o395
37	c3iz6S_	 Alignment	not modelled	16.5	20	PDB header: ribosome Chain: S: PDB Molecule: 40s ribosomal protein s19 (s19e); PDBTitle: localization of the small subunit ribosomal proteins into a 5.5 a2 cryo-em map of triticum aestivum translating 80s ribosome
38	c2zc0C_	 Alignment	not modelled	15.8	17	PDB header: transferase Chain: C: PDB Molecule: alanine glyoxylate transaminase; PDBTitle: crystal structure of an archaeal alanine:glyoxylate aminotransferase
39	d1s9ra_	 Alignment	not modelled	15.5	12	Fold: Pentain, beta/alpha-propeller Superfamily: Pentain Family: Arginine deiminase
40	d1lc5a_	 Alignment	not modelled	15.5	24	Fold: PLP-dependent transferase-like Superfamily: PLP-dependent transferases Family: AAT-like
41	d1x0ma1	 Alignment	not modelled	14.7	9	Fold: PLP-dependent transferase-like Superfamily: PLP-dependent transferases Family: AAT-like
42	c3jyvT_	 Alignment	not modelled	14.6	20	PDB header: ribosome Chain: T: PDB Molecule: s19e protein; PDBTitle: structure of the 40s rna and proteins and p/e trna for eukaryotic2 ribosome based on cryo-em map of thermomyces lanuginosus ribosome at3 8.9a resolution
43	d1vp4a_	 Alignment	not modelled	14.6	16	Fold: PLP-dependent transferase-like Superfamily: PLP-dependent transferases Family: AAT-like
44	c3mn2B_	 Alignment	not modelled	14.5	8	PDB header: transcription regulator Chain: B: PDB Molecule: probable arac family transcriptional regulator; PDBTitle: the crystal structure of a probable arac family transcriptional2 regulator from rhodopseudomonas palustris cga009
45	c3cq6E_	 Alignment	not modelled	13.9	17	PDB header: transferase Chain: E: PDB Molecule: histidinol-phosphate aminotransferase; PDBTitle: histidinol-phosphate aminotransferase from corynebacterium2 glutamicum holo-form (plp covalently bound)
46	c3ismA_	 Alignment	not modelled	13.6	19	PDB header: hydrolase inhibitor/hydrolase Chain: A: PDB Molecule: cg8862; PDBTitle: crystal structure of the endog/endogi complex: mechanism of endog2 inhibition
47	c3getA_	 Alignment	not modelled	13.4	22	PDB header: transferase Chain: A: PDB Molecule: histidinol-phosphate aminotransferase; PDBTitle: crystal structure of putative histidinol-phosphate aminotransferase2 (np_281508.1) from campylobacter jejuni at 2.01 a resolution
48	c3ftbA_	 Alignment	not modelled	13.2	10	PDB header: transferase Chain: A: PDB Molecule: histidinol-phosphate aminotransferase; PDBTitle: the crystal structure of the histidinol-phosphate2 aminotransferase from clostridium acetobutylicum
49	c3aiiA_	 Alignment	not modelled	12.7	26	PDB header: ligase Chain: A: PDB Molecule: glutamyl-trna synthetase; PDBTitle: archaeal non-discriminating glutamyl-trna synthetase from2 methanothermobacter thermautotrophicus
50	c3by0B_	 Alignment	not modelled	12.5	18	PDB header: ligand binding protein Chain: B: PDB Molecule: neutrophil gelatinase-associated lipocalin; PDBTitle: crystal structure of siderocalin (ngal, lipocalin 2) w79a-r81a2 complexed with ferric enterobactin
51	c3lsgD_	 Alignment	not modelled	12.4	18	PDB header: transcription regulator Chain: D: PDB Molecule: two-component response regulator yesn; PDBTitle: the crystal structure of the c-terminal domain of the two-2 component response regulator yesn from fusobacterium3 nucleatum subsp. nucleatum atcc 25586
						PDB header: transferase Chain: C: PDB Molecule: putative histidinol-phosphate

52	c3ly1C_	Alignment	not modelled	12.0	16	amino transferase; PDBTitle: crystal structure of putative histidinol-phosphate amino transferase2 (yp_050345.1) from erwinia carotovora atroseptica scri1043 at 1.80 a3 resolution
53	c3ezsB_	Alignment	not modelled	11.8	13	PDB header: transferase Chain: B: PDB Molecule: amino transferase aspb; PDBTitle: crystal structure of amino transferase aspb (np_207418.1) from2 helicobacter pylori 26695 at 2.19 a resolution
54	d1bw0a_	Alignment	not modelled	11.7	16	Fold: PLP-dependent transferase-like Superfamily: PLP-dependent transferases Family: AAT-like
55	c3s1sA_	Alignment	not modelled	11.4	10	PDB header: hydrolase, transferase Chain: A: PDB Molecule: restriction endonuclease bpusi; PDBTitle: characterization and crystal structure of the type iig restriction2 endonuclease bpusi
56	c2douA_	Alignment	not modelled	10.9	18	PDB header: transferase Chain: A: PDB Molecule: probable n-succinyl diaminopimelate amino transferase; PDBTitle: probable n-succinyl diaminopimelate amino transferase (ttha0342) from2 thermus thermophilus hb8
57	c2re3A_	Alignment	not modelled	10.6	45	PDB header: unknown function Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of a duf1285 family protein (spo_0140) from2 silicibacter pomeroyi dss-3 at 2.50 a resolution
58	c2xznT_	Alignment	not modelled	10.5	17	PDB header: ribosome Chain: T: PDB Molecule: rps19e; PDBTitle: crystal structure of the eukaryotic 40s ribosomal2 subunit in complex with initiation factor 1. this file3 contains the 40s subunit and initiation factor for4 molecule 2
59	c2yx5A_	Alignment	not modelled	10.1	28	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: upf0062 protein mj1593; PDBTitle: crystal structure of methanocaldococcus jannaschii purs, one of the2 subunits of formylglycinamide ribonucleotide amidotransferase in the3 purine biosynthetic pathway
60	d1n26a1	Alignment	not modelled	10.0	35	Fold: Immunoglobulin-like beta-sandwich Superfamily: Immunoglobulin Family: I set domains
61	d2nwva1	Alignment	not modelled	9.9	39	Fold: Xisl-like Superfamily: Xisl-like Family: Xisl-like
62	d1v30a_	Alignment	not modelled	9.8	43	Fold: Gamma-glutamyl cyclotransferase-like Superfamily: Gamma-glutamyl cyclotransferase-like Family: Gamma-glutamyl cyclotransferase-like
63	c2e12B_	Alignment	not modelled	9.7	50	PDB header: translation Chain: B: PDB Molecule: hypothetical protein xcc3642; PDBTitle: the crystal structure of xc5848 from xanthomonas campestris2 adopting a novel variant of sm-like motif
64	d1xhsa_	Alignment	not modelled	9.6	71	Fold: Gamma-glutamyl cyclotransferase-like Superfamily: Gamma-glutamyl cyclotransferase-like Family: Gamma-glutamyl cyclotransferase-like
65	c1d5yD_	Alignment	not modelled	9.5	15	PDB header: transcription/dna Chain: D: PDB Molecule: rob transcription factor; PDBTitle: crystal structure of the e. coli rob transcription factor2 in complex with dna
66	c2wo3B_	Alignment	not modelled	9.4	40	PDB header: transferase/signaling protein Chain: B: PDB Molecule: ephrin-a2; PDBTitle: crystal structure of the epha4-ephrina2 complex
67	c3ke2A_	Alignment	not modelled	9.4	19	PDB header: unknown function Chain: A: PDB Molecule: uncharacterized protein yp_928783.1; PDBTitle: crystal structure of a duf2131 family protein (sama_2911) from2 shewanella amazonensis sb2b at 2.50 a resolution
68	c2k6lA_	Alignment	not modelled	9.0	50	PDB header: unknown function Chain: A: PDB Molecule: putative uncharacterized protein; PDBTitle: the solution structure of xacb0070 from xanthomonas2 axonopodis pv citri reveals this new protein is a member of3 the rhh family of transcriptional repressors
69	c3a0hL_	Alignment	not modelled	8.8	67	PDB header: electron transport Chain: L: PDB Molecule: photosystem ii reaction center protein I; PDBTitle: crystal structure of i-substituted photosystem ii complex
70	c3a0hl_	Alignment	not modelled	8.8	67	PDB header: electron transport Chain: L: PDB Molecule: photosystem ii reaction center protein I; PDBTitle: crystal structure of i-substituted photosystem ii complex
71	d2nlva1	Alignment	not modelled	8.8	28	Fold: Xisl-like Superfamily: Xisl-like Family: Xisl-like
72	c3if2B_	Alignment	not modelled	8.7	14	PDB header: transferase Chain: B: PDB Molecule: amino transferase; PDBTitle: crystal structure of putative amino-acid amino transferase2 (yp_265399.1) from psychrobacter arcticum 273-4 at 2.50 a resolution
73	c3arcL_	Alignment	not modelled	8.6	67	PDB header: electron transport, photosynthesis Chain: L: PDB Molecule: photosystem ii reaction center protein I; PDBTitle: crystal structure of oxygen-evolving photosystem ii at 1.9 angstrom2 resolution
74	c1s5lL_	Alignment	not modelled	8.6	67	PDB header: photosynthesis Chain: L: PDB Molecule: photosystem ii reaction center I protein; PDBTitle: architecture of the photosynthetic oxygen evolving center
75	c3prrl_	Alignment	not modelled	8.6	67	PDB header: photosynthesis Chain: L: PDB Molecule: photosystem ii reaction center protein I; PDBTitle: crystal structure of cyanobacterial photosystem ii in complex with2 terbutryn (part 2 of 2). this file contains second monomer of psii3 dimer
76	c2axtl_	Alignment	not modelled	8.6	67	PDB header: electron transport Chain: L: PDB Molecule: photosystem ii reaction center I protein; PDBTitle: crystal structure of photosystem ii from

						thermosynechococcus elongatus
77	c3a0bL	Alignment	not modelled	8.6	67	PDB header: electron transport Chain: L: PDB Molecule: photosystem ii reaction center protein I; PDBTitle: crystal structure of br-substituted photosystem ii complex
78	c3a0bL	Alignment	not modelled	8.6	67	PDB header: electron transport Chain: L: PDB Molecule: photosystem ii reaction center protein I; PDBTitle: crystal structure of br-substituted photosystem ii complex
79	c3bz1L	Alignment	not modelled	8.6	67	PDB header: electron transport Chain: L: PDB Molecule: photosystem ii reaction center protein I; PDBTitle: crystal structure of cyanobacterial photosystem ii (part 12 of 2). this file contains first monomer of psii dimer
80	d2axtl	Alignment	not modelled	8.6	67	Fold: Single transmembrane helix Superfamily: Photosystem II reaction center protein L, PsbL Family: PsbL-like
81	c3bz2L	Alignment	not modelled	8.6	67	PDB header: electron transport Chain: L: PDB Molecule: photosystem ii reaction center protein I; PDBTitle: crystal structure of cyanobacterial photosystem ii (part 22 of 2). this file contains second monomer of psii dimer
82	c3prqL	Alignment	not modelled	8.6	67	PDB header: photosynthesis Chain: L: PDB Molecule: photosystem ii reaction center protein I; PDBTitle: crystal structure of cyanobacterial photosystem ii in complex with2 terbutryn (part 1 of 2). this file contains first monomer of psii3 dimer
83	c2axtl	Alignment	not modelled	8.6	67	PDB header: electron transport Chain: L: PDB Molecule: photosystem ii reaction center I protein; PDBTitle: crystal structure of photosystem ii from thermosynechococcus elongatus
84	c3kziL	Alignment	not modelled	8.6	67	PDB header: electron transport Chain: L: PDB Molecule: photosystem ii reaction center protein I; PDBTitle: crystal structure of monomeric form of cyanobacterial photosystem ii
85	c1s5ll	Alignment	not modelled	8.6	67	PDB header: photosynthesis Chain: L: PDB Molecule: photosystem ii reaction center I protein; PDBTitle: architecture of the photosynthetic oxygen evolving center
86	c2e58D	Alignment	not modelled	8.5	22	PDB header: transferase Chain: D: PDB Molecule: nmnc2; PDBTitle: crystal structure of nmnc2 from aquifex aeolicus
87	d1j32a	Alignment	not modelled	8.2	15	Fold: PLP-dependent transferase-like Superfamily: PLP-dependent transferases Family: AAT-like
88	c2euzA	Alignment	not modelled	7.9	29	PDB header: cell cycle/dna Chain: A: PDB Molecule: ndt80 protein; PDBTitle: structure of a ndt80-dna complex (mse mutant mc5t)
89	d1mnna	Alignment	not modelled	7.6	29	Fold: Common fold of diphtheria toxin/transcription factors/cytochrome f Superfamily: p53-like transcription factors Family: DNA-binding domain from NDT80
90	d1dqna	Alignment	not modelled	7.5	32	Fold: PRTase-like Superfamily: PRTase-like Family: Phosphoribosyltransferases (PRTases)
91	c1wr1B	Alignment	not modelled	7.5	29	PDB header: signaling protein Chain: B: PDB Molecule: ubiquitin-like protein dsk2; PDBTitle: the complex sturcture of dsk2p uba with ubiquitin
92	d1xi9a	Alignment	not modelled	7.2	11	Fold: PLP-dependent transferase-like Superfamily: PLP-dependent transferases Family: AAT-like
93	d2p97a1	Alignment	not modelled	7.0	15	Fold: Metallo-hydrolase/oxidoreductase Superfamily: Metallo-hydrolase/oxidoreductase Family: Ava3068-like
94	d1smye	Alignment	not modelled	6.9	41	Fold: RPB6/omega subunit-like Superfamily: RPB6/omega subunit-like Family: RNA polymerase omega subunit
95	c3ol4B	Alignment	not modelled	6.7	15	PDB header: unknown function Chain: B: PDB Molecule: putative uncharacterized protein; PDBTitle: crystal structure of a putative uncharacterized protein from2 mycobacterium smegmatis, an ortholog of rv0543c
96	c2xsta	Alignment	not modelled	6.6	13	PDB header: transport protein Chain: A: PDB Molecule: lipocalin 15; PDBTitle: crystal structure of the human lipocalin 15
97	d1dxha2	Alignment	not modelled	6.6	8	Fold: ATC-like Superfamily: Aspartate/ornithine carbamoyltransferase Family: Aspartate/ornithine carbamoyltransferase
98	d1lfpa	Alignment	not modelled	6.5	16	Fold: YebC-like Superfamily: YebC-like Family: YebC-like
99	d1gg4a3	Alignment	not modelled	6.4	9	Fold: MurF and HprK N-domain-like Superfamily: MurE/MurF N-terminal domain Family: MurE/MurF N-terminal domain