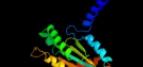
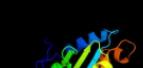
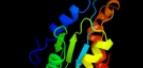


Phyre²

Email	i.a.kelley@imperial.ac.uk
Description	P76147
Date	Thu Jan 5 12:19:41 GMT 2012
Unique Job ID	b85969e74e69360e

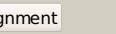
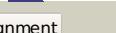
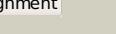
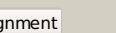
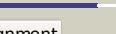
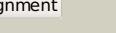
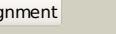
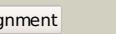
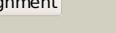
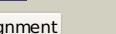
Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c1w25B	 Alignment		100.0	32	PDB header: signaling protein Chain: B; PDB Molecule: stalked-cell differentiation controlling protein; PDBTitle: response regulator pld in complex with c-digmp
2	c3ezuA	 Alignment		100.0	27	PDB header: signaling protein Chain: A; PDB Molecule: ggdef domain protein; PDBTitle: crystal structure of multidomain protein of unknown function with2 ggdef-domain (np_951600.1) from geobacter sulfurreducens at 1.95 a3 resolution
3	c3breA	 Alignment		100.0	33	PDB header: signaling protein Chain: A; PDB Molecule: probable two-component response regulator; PDBTitle: crystal structure of p.aeruginosa pa3702
4	c3i5aA	 Alignment		100.0	32	PDB header: signaling protein Chain: A; PDB Molecule: response regulator/ggdef domain protein; PDBTitle: crystal structure of full-length wpsr from pseudomonas syringae
5	c3hvaA	 Alignment		100.0	20	PDB header: transferase Chain: A; PDB Molecule: protein fimx; PDBTitle: crystal structure of fimx ggdef domain from pseudomonas2 aeruginosa
6	c3i5cA	 Alignment		100.0	32	PDB header: signaling protein Chain: A; PDB Molecule: fusion of general control protein gcn4 and wspR response PDBTitle: crystal structure of a fusion protein containing the leucine zipper of gcn4 and the ggdef domain of wspR from pseudomonas aeruginosa
7	c3ignA	 Alignment		100.0	27	PDB header: transferase Chain: A; PDB Molecule: diguanylate cyclase; PDBTitle: crystal structure of the ggdef domain from marinobacter2 aquaeolei diguanylate cyclase complexed with c-di-gmp -3 northeast structural genomics consortium target mqr89a
8	c3i5bA	 Alignment		100.0	36	PDB header: signaling protein Chain: A; PDB Molecule: wspR response regulator; PDBTitle: crystal structure of the isolated ggdef domain of wpsr from2 pseudomonas aeruginosa
9	c3icla	 Alignment		99.9	28	PDB header: structural genomics, unknown function Chain: A; PDB Molecule: eal/ggdef domain protein; PDBTitle: x-ray structure of protein (eal/ggdef domain protein) from2 m.capsulatus, northeast structural genomics consortium3 target mcr174c
10	d1w25a3	 Alignment		99.9	37	Fold: Ferredoxin-like Superfamily: Nucleotide cyclase Family: GGDEF domain
11	c3mtkA	 Alignment		99.9	19	PDB header: transferase Chain: A; PDB Molecule: diguanylate cyclase/phosphodiesterase; PDBTitle: x-ray structure of diguanylate cyclase/phosphodiesterase from2 caldicellulosiruptor saccharolyticus, northeast structural genomics3 consortium target clr27c

12	c3qyyB_			99.9	30	PDB header: signaling protein/inhibitor Chain: B: PDB Molecule: response regulator; PDBTitle: a novel interaction mode between a microbial ggdef domain and the bis-2 (3, 5)-cyclic di-gmp
13	c3pjwA_			99.9	17	PDB header: lyase Chain: A: PDB Molecule: cyclic dimeric gmp binding protein; PDBTitle: structure of pseudomonas fluorescence lapd ggdef-eal dual domain, i23
14	c3hvwA_			99.9	14	PDB header: lyase Chain: A: PDB Molecule: diguanylate-cyclase (dgc); PDBTitle: crystal structure of the ggdef domain of the pa2567 protein2 from pseudomonas aeruginosa, northeast structural genomics3 consortium target par365c
15	c3gfzB_			99.3	11	PDB header: hydrolase, signaling protein Chain: B: PDB Molecule: klebsiella pneumoniae blrp1; PDBTitle: klebsiella pneumoniae blrp1 ph 6 manganese/cy-digmp complex
16	c3p7nB_			98.1	6	PDB header: dna binding protein Chain: B: PDB Molecule: sensor histidine kinase; PDBTitle: crystal structure of light activated transcription factor el222 from2 erythrobacter litoralis
17	c2qv6D_			97.2	17	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
18	c1wc6B_			90.8	12	PDB header: lyase Chain: B: PDB Molecule: adenylate cyclase; PDBTitle: soluble adenylyl cyclase cyac from s. platensis in complex2 with rp-atpalphas in presence of bicarbonate
19	d1wcl_a			90.7	15	Fold: Ferrodoxin-like Superfamily: Nucleotide cyclase Family: Adenylyl and guanylyl cyclase catalytic domain
20	d1azsa_			89.6	15	Fold: Ferrodoxin-like Superfamily: Nucleotide cyclase Family: Adenylyl and guanylyl cyclase catalytic domain
21	c1cjka_		not modelled	89.4	14	PDB header: lyase/lyase/signaling protein Chain: A: PDB Molecule: adenylate cyclase, type v; PDBTitle: complex of gs-alpha with the catalytic domains of mammalian adenylyl2 cyclase: complex with adenosine 5'-(alpha thio)-triphosphate (rp),3 mg, and mn
22	d1fx4a_		not modelled	89.2	18	Fold: Ferrodoxin-like Superfamily: Nucleotide cyclase Family: Adenylyl and guanylyl cyclase catalytic domain
23	c1y10C_		not modelled	89.2	16	PDB header: lyase Chain: C: PDB Molecule: hypothetical protein rv1264/mt1302; PDBTitle: mycobacterial adenylyl cyclase rv1264, holoenzyme, inhibited state
24	d1fx2a_		not modelled	88.7	15	Fold: Ferrodoxin-like Superfamily: Nucleotide cyclase Family: Adenylyl and guanylyl cyclase catalytic domain
25	c3et6A_		not modelled	88.4	14	PDB header: lyase Chain: A: PDB Molecule: soluble guanylyl cyclase beta; PDBTitle: the crystal structure of the catalytic domain of a eukaryotic2 guanylyl cyclase
26	c3uvjC_		not modelled	86.0	11	PDB header: lyase Chain: C: PDB Molecule: guanylate cyclase soluble subunit alpha-3; PDBTitle: crystal structure of the catalytic domain of the heterodimeric human2 soluble guanylate cyclase 1.
27	c3mr7B_		not modelled	84.9	12	PDB header: hydrolase Chain: B: PDB Molecule: adenylate/guanylate cyclase/hydrolase, alpha/beta fold PDBTitle: crystal structure of adenylate/guanylate cyclase/hydrolase from2 silicibacter pomeroyi
						PDB header: lyase

28	c2w01C	Alignment	not modelled	84.2	12	Chain: C: PDB Molecule: adenylate cyclase; PDBTitle: crystal structure of the guanylyl cyclase cya2
29	c3r5gB	Alignment	not modelled	82.3	20	PDB header: lyase Chain: B: PDB Molecule: cyab; PDBTitle: crystal structure of the adenylyl cyclase cyab from <i>p. aeruginosa</i>
30	d1vh8a	Alignment	not modelled	76.6	10	Fold: Bacillus chorismate mutase-like Superfamily: IpsF-like Family: IpsF-like
31	c3b6nA	Alignment	not modelled	76.1	10	PDB header: lyase Chain: A: PDB Molecule: 2-c-methyl-d-erythritol 2,4-cyclodiphosphate PDBTitle: crystal structure of 2c-methyl-d-erythritol 2,4-2 cyclodiphosphate synthase pv003920 from <i>plasmodium vivax</i>
32	c1s97D	Alignment	not modelled	73.0	15	PDB header: transferase/dna Chain: D: PDB Molecule: dna polymerase iv; PDBTitle: dpo4 with gt mismatch
33	c1ybuA	Alignment	not modelled	72.6	13	PDB header: hydrolase Chain: A: PDB Molecule: lipj; PDBTitle: mycobacterium tuberculosis adenylyl cyclase rv1900c chd, in complex2 with a substrate analog.
34	c2pmpA	Alignment	not modelled	72.4	12	PDB header: lyase Chain: A: PDB Molecule: 2-c-methyl-d-erythritol 2,4-cyclodiphosphate synthase; PDBTitle: structure of 2c-methyl-d-erythritol 2,4-cyclodiphosphate synthase from2 the isoprenoid biosynthetic pathway of <i>arabidopsis thaliana</i>
35	d1w55a2	Alignment	not modelled	70.5	11	Fold: Bacillus chorismate mutase-like Superfamily: IpsF-like Family: IpsF-like
36	d1t0aa	Alignment	not modelled	70.1	14	Fold: Bacillus chorismate mutase-like Superfamily: IpsF-like Family: IpsF-like
37	d1gx1a	Alignment	not modelled	69.4	12	Fold: Bacillus chorismate mutase-like Superfamily: IpsF-like Family: IpsF-like
38	d1iv3a	Alignment	not modelled	68.8	14	Fold: Bacillus chorismate mutase-like Superfamily: IpsF-like Family: IpsF-like
39	c2aq4A	Alignment	not modelled	67.9	23	PDB header: transferase Chain: A: PDB Molecule: dna repair protein rev1; PDBTitle: ternary complex of the catalytic core of rev1 with dna and dctp.
40	c3f0gA	Alignment	not modelled	67.9	12	PDB header: lyase Chain: A: PDB Molecule: 2-c-methyl-d-erythritol 2,4-cyclodiphosphate synthase; PDBTitle: co-crystal structure of 2c-methyl-d-erythritol 2,4-cyclodiphosphate2 synthase with cmp
41	c1yk9A	Alignment	not modelled	66.2	12	PDB header: lyase Chain: A: PDB Molecule: adenylate cyclase; PDBTitle: crystal structure of a mutant form of the mycobacterial2 adenylyl cyclase rv1625c
42	d1im4a	Alignment	not modelled	64.1	20	Fold: DNA/RNA polymerases Superfamily: DNA/RNA polymerases Family: Lesion bypass DNA polymerase (Y-family), catalytic domain
43	c3gqcB	Alignment	not modelled	61.0	24	PDB header: transferase/dna Chain: B: PDB Molecule: dna repair protein rev1; PDBTitle: structure of human rev1-dna-dntp ternary complex
44	c3re3B	Alignment	not modelled	57.8	12	PDB header: lyase Chain: B: PDB Molecule: 2-c-methyl-d-erythritol 2,4-cyclodiphosphate synthase; PDBTitle: crystal structure of 2-c-methyl-d-erythritol 2,4-cyclodiphosphate2 synthase from <i>francisella tularensis</i>
45	c1k1qA	Alignment	not modelled	55.6	18	PDB header: transcription Chain: A: PDB Molecule: dbh protein; PDBTitle: crystal structure of a dinb family error prone dna2 polymerase from <i>sulfolobus solfataricus</i>
46	c2wz1B	Alignment	not modelled	55.3	9	PDB header: lyase Chain: B: PDB Molecule: guanylate cyclase soluble subunit beta-1; PDBTitle: structure of the catalytic domain of human soluble2 guanylate cyclase 1 beta 3.
47	c1w57A	Alignment	not modelled	55.1	10	PDB header: transferase Chain: A: PDB Molecule: ispd/ispf bifunctional enzyme; PDBTitle: structure of the bifunctional ispdf from <i>campylobacter2 jejuni</i> containing zn
48	d1jx4a2	Alignment	not modelled	51.0	15	Fold: DNA/RNA polymerases Superfamily: DNA/RNA polymerases Family: Lesion bypass DNA polymerase (Y-family), catalytic domain
49	c2r8kB	Alignment	not modelled	50.7	28	PDB header: replication, transferase/dna Chain: B: PDB Molecule: dna polymerase eta; PDBTitle: structure of the eukaryotic dna polymerase eta in complex with 1,2-2 d(gpp)-cisplatin containing dna
50	d1azsb	Alignment	not modelled	40.5	11	Fold: Ferredoxin-like Superfamily: Nucleotide cyclase Family: Adenylyl and guanylyl cyclase catalytic domain
51	c1jihA	Alignment	not modelled	37.8	29	PDB header: translation Chain: A: PDB Molecule: dna polymerase eta; PDBTitle: yeast dna polymerase eta
52	c3mr2A	Alignment	not modelled	32.7	32	PDB header: transferase/dna Chain: A: PDB Molecule: dna polymerase eta; PDBTitle: human dna polymerase eta in complex with normal dna and incoming2 nucleotide (nrm)
						PDB header: transferase/dna

53	c2oh2B	Alignment	not modelled	31.3	21	Chain: B: PDB Molecule: dna polymerase kappa; PDBTitle: ternary complex of human dna polymerase
54	c1xaxA	Alignment	not modelled	24.9	13	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: hypothetical upf0054 protein hi0004; PDBTitle: nmr structure of hi0004, a putative essential gene product2 from haemophilus influenzae
55	d1k1sa2	Alignment	not modelled	24.9	16	Fold: DNA/RNA polymerases Superfamily: DNA/RNA polymerases Family: Lesion bypass DNA polymerase (Y-family), catalytic domain
56	d2ox6a1	Alignment	not modelled	20.5	12	Fold: lambda repressor-like DNA-binding domains Superfamily: lambda repressor-like DNA-binding domains Family: YdiL-like
57	c3gkbB	Alignment	not modelled	20.0	20	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of a protein with unknown function which belongs to2 pfam duf74 family (pepe_0654) from pediococcus pentosaceus atcc 257453 at 2.73 a resolution
58	d1jiha2	Alignment	not modelled	19.5	28	Fold: DNA/RNA polymerases Superfamily: DNA/RNA polymerases Family: Lesion bypass DNA polymerase (Y-family), catalytic domain
59	c1yy3A	Alignment	not modelled	19.0	18	PDB header: isomerase Chain: A: PDB Molecule: s-adenosylmethionine:tRNA ribosyltransferase- PDBTitle: structure of s-adenosylmethionine:tRNA ribosyltransferase-2 isomerase (quea)
60	d2o5aa1	Alignment	not modelled	17.3	10	Fold: Nucleotidyltransferase Superfamily: Nucleotidyltransferase Family: Iojap/YbeB-like
61	d1wdia	Alignment	not modelled	16.9	18	Fold: QueA-like Superfamily: QueA-like Family: QueA-like
62	c2uzhB	Alignment	not modelled	15.3	21	PDB header: lyase Chain: B: PDB Molecule: 2c-methyl-d-erythritol 2,4-cyclodiphosphate PDBTitle: mycobacterium smegmatis 2c-methyl-d-erythritol-2,4-2 cyclodiphosphate synthase (ispf)
63	c1qgeE	Alignment	not modelled	14.5	16	PDB header: hydrolase Chain: E: PDB Molecule: protein (triacylglycerol hydrolase); PDBTitle: new crystal form of pseudomonas glumae (formerly chromobacterium2 viscosum atcc 6918) lipase
64	c2y1bA	Alignment	not modelled	14.1	14	PDB header: membrane protein Chain: A: PDB Molecule: putative outer membrane protein, signal; PDBTitle: crystal structure of the e. coli outer membrane lipoprotein2 rcsf
65	d2figa1	Alignment	not modelled	12.8	15	Fold: TIM beta/alpha-barrel Superfamily: Aldolase Family: GaZ-like
66	c2bbIA	Alignment	not modelled	11.0	14	PDB header: viral protein Chain: A: PDB Molecule: genome linked protein vpg; PDBTitle: nmr structures of the peptide linked to the genome (vpg) of2 poliovirus in a stabilizing solvent
67	c3l7xA	Alignment	not modelled	10.7	23	PDB header: cell cycle Chain: A: PDB Molecule: putative hit-like protein involved in cell-cycle PDBTitle: the crystal structure of smu.412c from streptococcus mutans ua159
68	d1xxaa	Alignment	not modelled	10.7	18	Fold: DCoH-like Superfamily: C-terminal domain of arginine repressor Family: C-terminal domain of arginine repressor
69	d2oyra1	Alignment	not modelled	10.6	25	Fold: S-adenosyl-L-methionine-dependent methyltransferases Superfamily: S-adenosyl-L-methionine-dependent methyltransferases Family: YhiQ-like
70	d2djka1	Alignment	not modelled	9.9	19	Fold: Thioredoxin fold Superfamily: Thioredoxin-like Family: PDI-like
71	c2r6zA	Alignment	not modelled	9.7	15	PDB header: transferase Chain: A: PDB Molecule: upf0341 protein in rsp 3' region; PDBTitle: crystal structure of the sam-dependent methyltransferase2 ngo1261 from neisseria gonorrhoeae, northeast structural3 genomics consortium target ngr48
72	c3iyuY	Alignment	not modelled	9.3	20	PDB header: virus Chain: Y: PDB Molecule: outer capsid protein vp4; PDBTitle: atomic model of an infectious rotavirus particle
73	c3onqB	Alignment	not modelled	9.1	7	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: regulator of polyketide synthase expression; PDBTitle: crystal structure of regulator of polyketide synthase expression2 bad_0249 from bifidobacterium adolescentis
74	c1iojA	Alignment	not modelled	9.0	56	PDB header: apolipoprotein Chain: A: PDB Molecule: apoc-i; PDBTitle: human apolipoprotein c-i, nmr, 18 structures
75	d2dlxa1	Alignment	not modelled	8.7	8	Fold: Thioredoxin fold Superfamily: Thioredoxin-like Family: UAS domain
76	c3anoA	Alignment	not modelled	8.6	19	PDB header: transferase Chain: A: PDB Molecule: ap-4-a phosphorylase; PDBTitle: crystal structure of a novel diadenosine 5',5'''-p1,p4-tetraphosphate2 phosphorylase from mycobacterium tuberculosis h37rv
77	d1ei7a	Alignment	not modelled	8.5	40	Fold: Four-helical up-and-down bundle Superfamily: TMV-like viral coat proteins Family: TMV-like viral coat proteins
						Fold: S-adenosyl-L-methionine-dependent methyltransferases

78	d2pkwa1		not modelled	8.5	25	Superfamily: S-adenosyl-L-methionine-dependent methyltransferases Family: YhiQ-like
79	d1nhoa		not modelled	8.5	17	Fold: Thioredoxin fold Superfamily: Thioredoxin-like Family: Thioltransferase
80	c3kmlB		not modelled	8.5	36	PDB header: viral protein Chain: B: PDB Molecule: coat protein; PDBTitle: circular permutant of the tobacco mosaic virus
81	c3upsA		not modelled	8.3	9	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: iojap-like protein; PDBTitle: crystal structure of iojap-like protein from zymomonas mobilis
82	d1zaka2		not modelled	8.3	29	Fold: Rubredoxin-like Superfamily: Microbial and mitochondrial ADK, insert "zinc finger" domain Family: Microbial and mitochondrial ADK, insert "zinc finger" domain
83	c3hf3A		not modelled	8.3	17	PDB header: oxidoreductase Chain: A: PDB Molecule: chromate reductase; PDBTitle: old yellow enzyme from thermus scotoductus sa-01
84	c2zhoB		not modelled	8.2	9	PDB header: transferase Chain: B: PDB Molecule: aspartokinase; PDBTitle: crystal structure of the regulatory subunit of aspartate2 kinase from thermus thermophilus (ligand free form)
85	c3imiB		not modelled	8.1	14	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: hit family protein; PDBTitle: 2.01 angstrom resolution crystal structure of a hit family protein2 from bacillus anthracis str. 'ames ancestor'
86	c2i46A		not modelled	8.1	5	PDB header: protein binding Chain: A: PDB Molecule: adrenocortical dysplasia protein homolog; PDBTitle: crystal structure of human tpp1
87	d1vtmp		not modelled	8.0	20	Fold: Four-helical up-and-down bundle Superfamily: TMV-like viral coat proteins Family: TMV-like viral coat proteins
88	d1xm5a		not modelled	8.0	18	Fold: Zincin-like Superfamily: Metalloproteases ("zincins"), catalytic domain Family: Predicted metal-dependent hydrolase
89	d1fo5a		not modelled	7.9	8	Fold: Thioredoxin fold Superfamily: Thioredoxin-like Family: Thioltransferase
90	d2jnwa1		not modelled	7.8	10	Fold: Restriction endonuclease-like Superfamily: Restriction endonuclease-like Family: XPF/Rad1/Mus81 nuclease
91	d2id1a1		not modelled	7.7	5	Fold: Nucleotidyltransferase Superfamily: Nucleotidyltransferase Family: lojap/YbeB-like
92	d1h2vc2		not modelled	7.7	36	Fold: alpha-alpha superhelix Superfamily: ARM repeat Family: MIF4G domain-like
93	d1qgva		not modelled	7.6	25	Fold: Thioredoxin fold Superfamily: Thioredoxin-like Family: spliceosomal protein U5-15Kd
94	c3nj2B		not modelled	7.4	19	PDB header: unknown function Chain: B: PDB Molecule: duf269-containing protein; PDBTitle: crystal structure of cce_0566 from the cyanobacterium cyanothece2 51142, a protein associated with nitrogen fixation from the duf2693 family
95	c2htfA		not modelled	7.4	27	PDB header: transferase Chain: A: PDB Molecule: dna polymerase mu; PDBTitle: the solution structure of the brct domain from human2 polymerase reveals homology with the tdt brct domain
96	c2qsiB		not modelled	7.3	11	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: putative hydrogenase expression/formation protein hupg; PDBTitle: crystal structure of putative hydrogenase expression/formation protein2 hupg from rhodopseudomonas palustris cga009
97	c1ps9A		not modelled	7.3	14	PDB header: oxidoreductase Chain: A: PDB Molecule: 2,4-dienoyl-coa reductase; PDBTitle: the crystal structure and reaction mechanism of e. coli 2,4-2 dienoyl coa reductase
98	c3k30B		not modelled	7.2	15	PDB header: oxidoreductase Chain: B: PDB Molecule: histamine dehydrogenase; PDBTitle: histamine dehydrogenase from nocardiodes simplex
99	c2zqeA		not modelled	7.1	14	PDB header: dna binding protein Chain: A: PDB Molecule: mutS2 protein; PDBTitle: crystal structure of the smr domain of thermus thermophilus muts2