
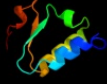

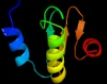


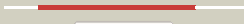
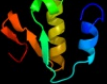





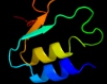





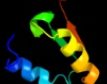


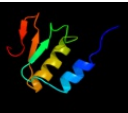




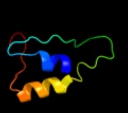

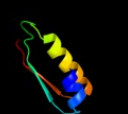



Phyre2

Email	l.a.kelley@imperial.ac.uk
Description	P76611
Date	Thu Jan 5 12:24:57 GMT 2012
Unique Job ID	3903eed1dc4e245b

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c3pkzK_	 Alignment		99.4	17	PDB header: recombination Chain: K: PDB Molecule: recombinase sin; PDBTitle: structural basis for catalytic activation of a serine recombinase
2	c3g13B_	 Alignment		99.4	14	PDB header: recombination Chain: B: PDB Molecule: putative conjugative transposon recombinase; PDBTitle: crystal structure of putative conjugative transposon recombinase from2 clostridium difficile
3	c2r0qF_	 Alignment		99.4	18	PDB header: recombination/dna Chain: F: PDB Molecule: putative transposon tn552 dna-invertase bin3; PDBTitle: crystal structure of a serine recombinase- dna regulatory2 complex
4	d2rsla_	 Alignment		99.2	30	Fold: Resolvase-like Superfamily: Resolvase-like Family: gamma,delta resolvase, catalytic domain
5	c2gm4B_	 Alignment		99.2	29	PDB header: recombination, dna Chain: B: PDB Molecule: transposon gamma-delta resolvase; PDBTitle: an activated, tetrameric gamma-delta resolvase: hin chimaera bound to2 cleaved dna
6	c3ploX_	 Alignment		99.2	46	PDB header: recombination Chain: X: PDB Molecule: dna-invertase; PDBTitle: crystal structure of the fis-independent mutant of gin
7	d1hx7a_	 Alignment		99.2	29	Fold: Resolvase-like Superfamily: Resolvase-like Family: gamma,delta resolvase, catalytic domain
8	d2gm4a2	 Alignment		99.1	31	Fold: Resolvase-like Superfamily: Resolvase-like Family: gamma,delta resolvase, catalytic domain
9	d1gdta2	 Alignment		99.0	28	Fold: Resolvase-like Superfamily: Resolvase-like Family: gamma,delta resolvase, catalytic domain
10	c3lhkA_	 Alignment		98.8	16	PDB header: dna binding protein Chain: A: PDB Molecule: putative dna binding protein mj0014; PDBTitle: crystal structure of putative dna binding protein from2 methanocaldococcus jannaschii.
11	c3lhfC_	 Alignment		98.8	23	PDB header: recombination Chain: C: PDB Molecule: serine recombinase; PDBTitle: the crystal structure of a serine recombinase from2 sulfolobus solfataricus to 2.3a

12	c3guvA	Alignment		98.7	21	PDB header: recombination Chain: A: PDB Molecule: site-specific recombinase, resolvase family protein; PDBTitle: crystal structure of a resolvase family site-specific recombinase from <i>Streptococcus pneumoniae</i>
13	c3bvpB	Alignment		98.7	26	PDB header: recombination Chain: B: PDB Molecule: tp901-1 integrase; PDBTitle: crystal structure of the n-terminal catalytic domain of tp901-12 integrase
14	d2obba1	Alignment		85.3	18	Fold: HAD-like Superfamily: HAD-like Family: BT0820-like
15	c3trjC	Alignment		82.2	20	PDB header: isomerase Chain: C: PDB Molecule: phosphoheptose isomerase; PDBTitle: structure of a phosphoheptose isomerase from <i>Francisella tularensis</i>
16	c3shoA	Alignment		78.1	22	PDB header: transcription regulator Chain: A: PDB Molecule: transcriptional regulator, rpir family; PDBTitle: crystal structure of rpir transcription factor from <i>Sphaerobacter</i> thermophilus (sugar isomerase domain)
17	d2c71a1	Alignment		77.1	15	Fold: 7-stranded beta/alpha barrel Superfamily: Glycoside hydrolase/deacetylase Family: NodB-like polysaccharide deacetylase
18	d2cc0a1	Alignment		74.9	11	Fold: 7-stranded beta/alpha barrel Superfamily: Glycoside hydrolase/deacetylase Family: NodB-like polysaccharide deacetylase
19	c2x3yA	Alignment		72.6	9	PDB header: isomerase Chain: A: PDB Molecule: phosphoheptose isomerase; PDBTitle: crystal structure of gmha from <i>Burkholderia pseudomallei</i>
20	d1x92a	Alignment		72.5	14	Fold: SIS domain Superfamily: SIS domain Family: mono-SIS domain
21	d2c1ia1	Alignment	not modelled	70.1	16	Fold: 7-stranded beta/alpha barrel Superfamily: Glycoside hydrolase/deacetylase Family: NodB-like polysaccharide deacetylase
22	d1x94a	Alignment	not modelled	69.6	15	Fold: SIS domain Superfamily: SIS domain Family: mono-SIS domain
23	c2xhzC	Alignment	not modelled	69.1	5	PDB header: isomerase Chain: C: PDB Molecule: arabinose 5-phosphate isomerase; PDBTitle: probing the active site of the sugar isomerase domain from <i>E. coli</i> 2 arabinose-5-phosphate isomerase via x-ray crystallography
24	c2yvab	Alignment	not modelled	67.9	22	PDB header: dna binding protein Chain: B: PDB Molecule: dnaa initiator-associating protein diaa; PDBTitle: crystal structure of <i>Escherichia coli</i> diaa
25	d1jeoa	Alignment	not modelled	63.7	8	Fold: SIS domain Superfamily: SIS domain Family: mono-SIS domain
26	d1tk9a	Alignment	not modelled	58.8	10	Fold: SIS domain Superfamily: SIS domain Family: mono-SIS domain
27	c1w17A	Alignment	not modelled	56.1	13	PDB header: hydrolase Chain: A: PDB Molecule: probable polysaccharide deacetylase pdaa; PDBTitle: structure of <i>Bacillus subtilis</i> pdaa, a family 42 carbohydrate esterase.
28	c3fxaA	Alignment	not modelled	55.9	10	PDB header: sugar binding protein Chain: A: PDB Molecule: sis domain protein; PDBTitle: crystal structure of a putative sugar-phosphate isomerase2 (Imof2365_0531) from <i>Listeria monocytogenes</i> str. 4b f2365 at 1.60 Å resolution

29	dlvima_	Alignment	not modelled	55.7	12	Fold: SIS domain Superfamily: SIS domain Family: mono-SIS domain
30	dlm3sa_	Alignment	not modelled	55.4	10	Fold: SIS domain Superfamily: SIS domain Family: mono-SIS domain
31	dlnyla_	Alignment	not modelled	54.9	13	Fold: 7-stranded beta/alpha barrel Superfamily: Glycoside hydrolase/deacetylase Family: NodB-like polysaccharide deacetylase
32	d2p8ta2	Alignment	not modelled	48.8	10	Fold: DcoH-like Superfamily: GAD domain-like Family: PH0730 C-terminal domain-like
33	c3etnD_	Alignment	not modelled	47.4	15	PDB header: isomerase Chain: D: PDB Molecule: putative phosphosugar isomerase involved in capsule PDBTitle: crystal structure of putative phosphosugar isomerase involved in2 capsule formation (yp_209877.1) from bacteroides fragilis nctc 93433 at 1.70 a resolution
34	c2c1iA_	Alignment	not modelled	47.2	17	PDB header: hydrolase Chain: A: PDB Molecule: peptidoglycan glcnac deacetylase; PDBTitle: structure of streptococcus pneumoniae peptidoglycan2 deacetylase (sppgda) d 275 n mutant.
35	dlj8fa_	Alignment	not modelled	40.1	14	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Sir2 family of transcriptional regulators
36	c2vyoA_	Alignment	not modelled	36.0	9	PDB header: hydrolase Chain: A: PDB Molecule: chitooligosaccharide deacetylase; PDBTitle: chitin deacetylase family member from encephalitozoon2 cuniculi
37	c3cvjB_	Alignment	not modelled	35.5	16	PDB header: isomerase Chain: B: PDB Molecule: putative phosphoheptose isomerase; PDBTitle: crystal structure of a putative phosphoheptose isomerase (bh3325) from2 bacillus halodurans c-125 at 2.00 a resolution
38	c1q14A_	Alignment	not modelled	35.1	17	PDB header: hydrolase Chain: A: PDB Molecule: hst2 protein; PDBTitle: structure and autoregulation of the yeast hst2 homolog of sir2
39	c2puwA_	Alignment	not modelled	32.6	10	PDB header: transferase Chain: A: PDB Molecule: isomerase domain of glutamine-fructose-6-phosphate PDBTitle: the crystal structure of isomerase domain of glucosamine-6-phosphate2 synthase from candida albicans
40	d2jfga2	Alignment	not modelled	30.4	16	Fold: MurD-like peptide ligases, peptide-binding domain Superfamily: MurD-like peptide ligases, peptide-binding domain Family: MurCDEF C-terminal domain
41	d2j13a1	Alignment	not modelled	28.1	24	Fold: 7-stranded beta/alpha barrel Superfamily: Glycoside hydrolase/deacetylase Family: NodB-like polysaccharide deacetylase
42	d2nlya1	Alignment	not modelled	27.8	14	Fold: 7-stranded beta/alpha barrel Superfamily: Glycoside hydrolase/deacetylase Family: Divergent polysaccharide deacetylase
43	c3pryA_	Alignment	not modelled	26.9	12	PDB header: chaperone Chain: A: PDB Molecule: heat shock protein hsp 90-beta; PDBTitle: crystal structure of the middle domain of human hsp90-beta refined at2 2.3 a resolution
44	c3glsC_	Alignment	not modelled	26.5	23	PDB header: hydrolase Chain: C: PDB Molecule: nad-dependent deacetylase sirtuin-3, PDBTitle: crystal structure of human sirt3
45	dlq1aa_	Alignment	not modelled	24.5	17	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Sir2 family of transcriptional regulators
46	c2hjhb_	Alignment	not modelled	22.6	17	PDB header: hydrolase Chain: B: PDB Molecule: nad-dependent histone deacetylase sir2; PDBTitle: crystal structure of the sir2 deacetylase
47	c2w3zA_	Alignment	not modelled	22.1	15	PDB header: hydrolase Chain: A: PDB Molecule: putative deacetylase; PDBTitle: structure of a streptococcus mutans ce4 esterase
48	c2zj3A_	Alignment	not modelled	19.3	10	PDB header: transferase Chain: A: PDB Molecule: glucosamine--fructose-6-phosphate PDBTitle: isomerase domain of human glucose:fructose-6-phosphate2 amidotransferase
49	c3pkiF_	Alignment	not modelled	17.7	13	PDB header: hydrolase Chain: F: PDB Molecule: nad-dependent deacetylase sirtuin-6; PDBTitle: human sirt6 crystal structure in complex with adp ribose
50	c3k35D_	Alignment	not modelled	15.3	13	PDB header: hydrolase Chain: D: PDB Molecule: nad-dependent deacetylase sirtuin-6; PDBTitle: crystal structure of human sirt6
51	c1gqqA_	Alignment	not modelled	14.5	13	PDB header: cell wall biosynthesis Chain: A: PDB Molecule: udp-n-acetylmuramate-l-alanine ligase; PDBTitle: murc - crystal structure of the apo-enzyme from haemophilus2 influenzae
52	d1xdpa3	Alignment	not modelled	13.9	12	Fold: Phospholipase D/nuclease Superfamily: Phospholipase D/nuclease Family: Polyphosphate kinase C-terminal domain
53	c2odkD_	Alignment	not modelled	13.6	5	PDB header: structural genomics, unknown function Chain: D: PDB Molecule: hypothetical protein; PDBTitle: putative prevent-host-death protein from nitrosomonas europaea
54	c2gq0B_	Alignment	not modelled	13.1	20	PDB header: chaperone, hydrolase Chain: B: PDB Molecule: chaperone protein htpg; PDBTitle: crystal structure of the middle domain of htpg, the e. coli2 hsp90
						PDB header: hydrolase

55	c3kw0D_	Alignment	not modelled	12.7	13	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
56	c3ipzA_	Alignment	not modelled	12.5	14	PDB header: electron transport, oxidoreductase Chain: A: PDB Molecule: monothiol glutaredoxin-s14, chloroplastic; PDBTitle: crystal structure of arabidopsis monothiol glutaredoxin atgrxcp
57	dlusua_	Alignment	not modelled	12.5	12	Fold: Ribosomal protein S5 domain 2-like Superfamily: Ribosomal protein S5 domain 2-like Family: Hsp90 middle domain
58	dlx52a1	Alignment	not modelled	12.3	25	Fold: Bacillus chorismate mutase-like Superfamily: L30e-like Family: ERF1/Dom34 C-terminal domain-like
59	dl0fla_	Alignment	not modelled	11.7	17	Fold: Single-stranded right-handed beta-helix Superfamily: Pectin lyase-like Family: Chondroitinase B
60	c3efhB_	Alignment	not modelled	11.5	8	PDB header: transferase Chain: B: PDB Molecule: ribose-phosphate pyrophosphokinase 1; PDBTitle: crystal structure of human phosphoribosyl pyrophosphate2 synthetase 1
61	dlp3da2	Alignment	not modelled	11.5	14	Fold: MurD-like peptide ligases, peptide-binding domain Superfamily: MurD-like peptide ligases, peptide-binding domain Family: MurCDEF C-terminal domain
62	c3e7nB_	Alignment	not modelled	11.4	20	PDB header: transport protein Chain: B: PDB Molecule: d-ribose high-affinity transport system; PDBTitle: crystal structure of d-ribose high-affinity transport system from2 salmonella typhimurium lt2
63	c2a3nA_	Alignment	not modelled	11.4	12	PDB header: sugar binding protein Chain: A: PDB Molecule: putative glucosamine-fructose-6-phosphate aminotransferase; PDBTitle: crystal structure of a putative glucosamine-fructose-6-phosphate2 aminotransferase (stm4540.s) from salmonella typhimurium lt2 at 1.353 a resolution
64	clhk7A_	Alignment	not modelled	11.3	12	PDB header: chaperone Chain: A: PDB Molecule: heat shock protein hsp82; PDBTitle: middle domain of hsp90
65	c3mvnA_	Alignment	not modelled	10.9	6	PDB header: ligase Chain: A: PDB Molecule: udp-n-acetylmuramate:l-alanyl-gamma-d-glutamyl-medo- PDBTitle: crystal structure of a domain from a putative udp-n-acetylmuramate:l-2 alanyl-gamma-d-glutamyl-medo-diaminopimelate ligase from haemophilus3 ducreyi 35000hp
66	c2o1wB_	Alignment	not modelled	10.7	14	PDB header: chaperone Chain: B: PDB Molecule: endoplasmic; PDBTitle: structure of n-terminal plus middle domains (n+m) of grp94
67	cldbgA_	Alignment	not modelled	10.4	17	PDB header: lyase Chain: A: PDB Molecule: chondroitinase b; PDBTitle: crystal structure of chondroitinase b
68	dlx9aa_	Alignment	not modelled	10.1	14	Fold: DsrEFH-like Superfamily: DsrEFH-like Family: DsrH-like
69	c2p5dA_	Alignment	not modelled	10.0	21	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: upf0310 protein mjcl36; PDBTitle: crystal structure of mjcl36 from methanocaldococcus2 jannaschii dsm 2661
70	dlps9a1	Alignment	not modelled	9.7	16	Fold: TIM beta/alpha-barrel Superfamily: FMN-linked oxidoreductases Family: FMN-linked oxidoreductases
71	dlogda_	Alignment	not modelled	9.6	15	Fold: RbsD-like Superfamily: RbsD-like Family: RbsD-like
72	c3p13B_	Alignment	not modelled	9.6	15	PDB header: isomerase Chain: B: PDB Molecule: d-ribose pyranase; PDBTitle: complex structure of d-ribose pyranase sa240 with d-ribose
73	c2o14A_	Alignment	not modelled	9.5	6	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: hypothetical protein yxim; PDBTitle: x-ray crystal structure of protein yxim_bacsu from bacillus2 subtilis. northeast structural genomics consortium target3 sr595
74	dle8ca2	Alignment	not modelled	9.3	17	Fold: MurD-like peptide ligases, peptide-binding domain Superfamily: MurD-like peptide ligases, peptide-binding domain Family: MurCDEF C-terminal domain
75	c3hs2H_	Alignment	not modelled	8.9	19	PDB header: antitoxin Chain: H: PDB Molecule: prevent host death protein; PDBTitle: crystal structure of phd truncated to residue 57 in an orthorhombic2 space group
76	dlx9ia_	Alignment	not modelled	8.7	15	Fold: SIS domain Superfamily: SIS domain Family: double-SIS domain
77	cldkrB_	Alignment	not modelled	8.7	10	PDB header: transferase Chain: B: PDB Molecule: phosphoribosyl pyrophosphate synthetase; PDBTitle: crystal structures of bacillus subtilis phosphoribosylpyrophosphate2 synthetase: molecular basis of allosteric inhibition and activation.
78	c3hryA_	Alignment	not modelled	8.6	19	PDB header: antitoxin Chain: A: PDB Molecule: prevent host death protein; PDBTitle: crystal structure of phd in a trigonal space group and partially2 disordered
79	d2iw0a1	Alignment	not modelled	8.4	11	Fold: 7-stranded beta/alpha barrel Superfamily: Glycoside hydrolase/deacetylase Family: NodB-like polysaccharide deacetylase

80	d2odka1	Alignment	not modelled	8.0	5	Fold: YefM-like Superfamily: YefM-like Family: YefM-like
81	d1q45a_	Alignment	not modelled	7.9	23	Fold: TIM beta/alpha-barrel Superfamily: FMN-linked oxidoreductases Family: FMN-linked oxidoreductases
82	d2gbsa1	Alignment	not modelled	7.9	14	Fold: PUA domain-like Superfamily: PUA domain-like Family: Atu2648/PH1033-like
83	c2wztA_	Alignment	not modelled	7.8	9	PDB header: oxidoreductase Chain: A: PDB Molecule: aldo-keto reductase; PDBTitle: crystal structure of a mycobacterium aldo-keto reductase in2 its apo and liganded form
84	d2hd9a1	Alignment	not modelled	7.6	18	Fold: PUA domain-like Superfamily: PUA domain-like Family: Atu2648/PH1033-like
85	d1vjia_	Alignment	not modelled	7.6	19	Fold: TIM beta/alpha-barrel Superfamily: FMN-linked oxidoreductases Family: FMN-linked oxidoreductases
86	d2ob5a1	Alignment	not modelled	7.4	15	Fold: RbsD-like Superfamily: RbsD-like Family: RbsD-like
87	d1zcea1	Alignment	not modelled	7.1	14	Fold: PUA domain-like Superfamily: PUA domain-like Family: Atu2648/PH1033-like
88	d1hw6a_	Alignment	not modelled	7.1	14	Fold: TIM beta/alpha-barrel Superfamily: NAD(P)-linked oxidoreductase Family: Aldo-keto reductases (NADP)
89	c1xkmC_	Alignment	not modelled	7.0	24	PDB header: antibiotic Chain: C: PDB Molecule: distinctin chain a; PDBTitle: nmr structure of antimicrobial peptide distinctin in water
90	c1pgiA_	Alignment	not modelled	7.0	15	PDB header: oxidoreductase Chain: A: PDB Molecule: 6-phosphogluconate dehydrogenase; PDBTitle: x-ray structure of 6-phosphogluconate dehydrogenase from the protozoan2 parasite t. brucei
91	c1y6zA_	Alignment	not modelled	6.9	10	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: heat shock protein, putative; PDBTitle: middle domain of plasmodium falciparum putative heat shock protein2 pf14_0417
92	c3hn7A_	Alignment	not modelled	6.9	13	PDB header: ligase Chain: A: PDB Molecule: udp-n-acetylmuramate-l-alanine ligase; PDBTitle: crystal structure of a murein peptide ligase mpl (psyc_0032) from2 psychrobacter arcticus 273-4 at 1.65 a resolution
93	c3mvkA_	Alignment	not modelled	6.9	20	PDB header: isomerase Chain: A: PDB Molecule: protein fucu; PDBTitle: the crystal structure of fucu from bifidobacterium longum to 1.65a
94	c3iz6V_	Alignment	not modelled	6.8	20	PDB header: ribosome Chain: V: PDB Molecule: 40s ribosomal protein s25 (s25e); PDBTitle: localization of the small subunit ribosomal proteins into a 5.5 a2 cryo-em map of triticum aestivum translating 80s ribosome
95	c2o8rA_	Alignment	not modelled	6.7	19	PDB header: transferase Chain: A: PDB Molecule: polyphosphate kinase; PDBTitle: crystal structure of polyphosphate kinase from2 porphyromonas gingivalis
96	c1xkmA_	Alignment	not modelled	6.5	29	PDB header: antibiotic Chain: A: PDB Molecule: distinctin chain a; PDBTitle: nmr structure of antimicrobial peptide distinctin in water
97	d1a6fa_	Alignment	not modelled	6.5	7	Fold: Ribosomal protein S5 domain 2-like Superfamily: Ribosomal protein S5 domain 2-like Family: RNase P protein
98	c3hjcA_	Alignment	not modelled	6.3	18	PDB header: chaperone Chain: A: PDB Molecule: heat shock protein 83-1; PDBTitle: crystal structure of the carboxy-terminal domain of hsp90 from2 leishmania major, lmj33.0312
99	c2iw0A_	Alignment	not modelled	6.3	11	PDB header: hydrolase Chain: A: PDB Molecule: chitin deacetylase; PDBTitle: structure of the chitin deacetylase from the fungal2 pathogen colletotrichum lindemuthianum