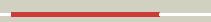
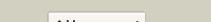
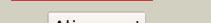
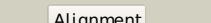
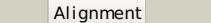
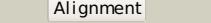
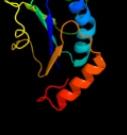
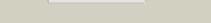


Phyre²

Email	i.a.kelley@imperial.ac.uk
Description	P77293
Date	Thu Jan 5 12:27:17 GMT 2012
Unique Job ID	c5fa42bd64afe73e

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c1xhbA			100.0	18	PDB header: transferase Chain: A; PDB Molecule: polypeptide n-acetylgalactosaminyltransferase 1; PDBTitle: the crystal structure of udp-galnac: polypeptide alpha-n-2 acetylgalactosaminyltransferase-t1
2	c3f1yC			100.0	13	PDB header: transferase Chain: C; PDB Molecule: mannosyl-3-phosphoglycerate synthase; PDBTitle: mannosyl-3-phosphoglycerate synthase from rubrobacter xylanophilus
3	c2ffuA			100.0	19	PDB header: transferase Chain: A; PDB Molecule: polypeptide n-acetylgalactosaminyltransferase 2; PDBTitle: crystal structure of human ppgalact-2 complexed with udp2 and ea2
4	c2d7iA			100.0	18	PDB header: transferase Chain: A; PDB Molecule: polypeptide n-acetylgalactosaminyltransferase 10; PDBTitle: crystal structure of pp-galnac-t10 with udp, galnac and mn2+
5	d1xhb2			100.0	17	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: Polypeptide N-acetylgalactosaminyltransferase 1, N-terminal domain
6	c3ckvA			100.0	18	PDB header: unknown function Chain: A; PDB Molecule: putative uncharacterized protein; PDBTitle: crystal structure of a mycobacterial protein
7	c2z86D			100.0	16	PDB header: transferase Chain: D; PDB Molecule: chondroitin synthase; PDBTitle: crystal structure of chondroitin polymerase from escherichia coli strain k4 (k4cp) complexed with udp-glua3 and udp
8	d1omza			99.9	14	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: Exostosin
9	c1omxB			99.9	15	PDB header: transferase Chain: B; PDB Molecule: alpha-1,4-n-acetylhexosaminyltransferase ext2; PDBTitle: crystal structure of mouse alpha-1,4-n-2 acetylhexosaminyltransferase (ext2)
10	c3bcvA			99.9	19	PDB header: transferase Chain: A; PDB Molecule: putative glycosyltransferase protein; PDBTitle: crystal structure of a putative glycosyltransferase from bacteroides2 fragilis
11	d1qg8a			99.9	12	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: Spore coat polysaccharide biosynthesis protein SpsA

12	d2bo4a1			99.8	18	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: MGS-like
13	c2qgiA			99.7	10	PDB header: transferase Chain: A: PDB Molecule: atp synthase subunits region orf 6; PDBTitle: the udp complex structure of the sixth gene product of the f1-ATPase2 operon of rhodobacter blasticus
14	d1pzta			98.9	16	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: beta 1,4 galactosyltransferase (b4Galt1)
15	c3lw6A			98.3	18	PDB header: transferase Chain: A: PDB Molecule: beta-4-galactosyltransferase 7; PDBTitle: crystal structure of drosophila beta1,4-galactosyltransferase-7
16	d1fo8a			98.1	10	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: N-acetylglucosaminyltransferase I
17	c2wvmA			98.1	17	PDB header: transferase Chain: A: PDB Molecule: mannosyl-3-phosphoglycerate synthase; PDBTitle: h309a mutant of mannosyl-3-phosphoglycerate synthase from thermus thermophilus hb27 in complex with 3 gdp-alpha-d-mannose and mg(ii)
18	c2zu8A			98.0	12	PDB header: transferase Chain: A: PDB Molecule: mannosyl-3-phosphoglycerate synthase; PDBTitle: crystal structure of mannosyl-3-phosphoglycerate synthase2 from pyrococcus horikoshii
19	d3cu0a1			96.9	15	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: 1,3-glucuronyltransferase
20	c2px7A			96.5	13	PDB header: transferase Chain: A: PDB Molecule: 2-c-methyl-d-erythritol 4-phosphate PDBTitle: crystal structure of 2-c-methyl-d-erythritol 4-phosphate2 cytidylyltransferase from thermus thermophilus hb8
21	c1w57A		not modelled	95.9	13	PDB header: transferase Chain: A: PDB Molecule: ispd/ispf bifunctional enzyme; PDBTitle: structure of the bifunctional ispd from campylobacter jejuni containing zn
22	d1v82a		not modelled	95.8	11	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: 1,3-glucuronyltransferase
23	c2d0jD		not modelled	95.8	16	PDB header: transferase Chain: D: PDB Molecule: galactosylgalactosylxylosylprotein 3-beta- PDBTitle: crystal structure of human glcat-s apo form
24	d1i52a		not modelled	95.4	9	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: Cytidylyltransferase
25	d1vh3a		not modelled	95.0	12	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: Cytidylyltransferase
26	c2wawa		not modelled	92.4	10	PDB header: unknown function Chain: A: PDB Molecule: moba relate protein; PDBTitle: crystal structure of mycobacterium tuberculosis rv371c2 homolog from mycobacterium sp. strain jc1
27	d1w55a1		not modelled	92.4	11	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: Cytidylyltransferase
28	d1vpaa		not modelled	92.0	8	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: Cytidylyltransferase
29	c3ht8R		not modelled	91.3	11	PDB header: transferase Chain: B: PDB Molecule: glycosyl transferase family 8;

29	c2wv	Alignment	not modelled	91.2	11	PDBTitle: the structure of a protein in glycosyl transferase family 8 from2 anaerococcus prevotii.
30	d1w77a1	Alignment	not modelled	88.7	11	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: Cytidyltransferase
31	d1vgwa	Alignment	not modelled	88.4	16	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: Cytidyltransferase
32	d1fxoa	Alignment	not modelled	87.0	9	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: glucose-1-phosphate thymidyltransferase
33	c3oamD	Alignment	not modelled	86.8	19	PDB header: transferase Chain: D: PDB Molecule: 3-deoxy-manno-octulosonate cytidyltransferase; PDBTitle: crystal structure of cytidyltransferase from vibrio cholerae
34	c3okrA	Alignment	not modelled	84.1	14	PDB header: transferase Chain: A: PDB Molecule: 2-c-methyl-d-erythritol 4-phosphate cytidyltransferase; PDBTitle: structure of mtb apo 2-c-methyl-d-erythritol 4-phosphate2 cytidyltransferase (ispd)
35	c1ga8A	Alignment	not modelled	82.9	12	PDB header: transferase Chain: A: PDB Molecule: galactosyl transferase Igtc; PDBTitle: crystal structure of galacosyltransferase Igtc in complex2 with donor and acceptor sugar analogs.
36	d1ga8a	Alignment	not modelled	82.9	12	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: Galactosyltransferase LgtC
37	c1jyIC	Alignment	not modelled	81.9	15	PDB header: transferase Chain: C: PDB Molecule: cpt:phosphocholine cytidyltransferase; PDBTitle: catalytic mechanism of cpt:phosphocholine2 cytidyltransferase from streptococcus pneumoniae (licc)
38	d1lvwa	Alignment	not modelled	81.8	8	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: glucose-1-phosphate thymidyltransferase
39	d1h5ra	Alignment	not modelled	80.0	10	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: glucose-1-phosphate thymidyltransferase
40	c2gamA	Alignment	not modelled	79.8	8	PDB header: transferase Chain: A: PDB Molecule: beta-1,6-n-acetylglucosaminyltransferase; PDBTitle: x-ray crystal structure of murine leukocyte-type core 2 b1,2 6-n-acetylglucosaminyltransferase (c2gnt-I) in complex3 with galb1,3galnac
41	c2xwlB	Alignment	not modelled	79.6	10	PDB header: transferase Chain: B: PDB Molecule: 2-c-methyl-d-erythritol 4-phosphate cytidyltransferase; PDBTitle: crystal structure of ispd from mycobacterium smegmatis in complex2 with ctp and mg
42	c3d5nB	Alignment	not modelled	79.0	14	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: q97w15_sulso; PDBTitle: crystal structure of the q97w15_sulso protein from2 sulfolobus solfataricus. nesg target ssr125.
43	c1zcya	Alignment	not modelled	77.9	10	PDB header: transferase Chain: A: PDB Molecule: glycogenin-1; PDBTitle: apo form of a mutant of glycogenin in which asp159 is replaced by ser
44	c3hl3A	Alignment	not modelled	75.4	10	PDB header: transferase Chain: A: PDB Molecule: glucose-1-phosphate thymidyltransferase; PDBTitle: 2.76 angstrom crystal structure of a putative glucose-1-phosphate2 thymidyltransferase from bacillus anthracis in complex with a3 sucrose.
45	c3okrC	Alignment	not modelled	73.4	13	PDB header: transferase Chain: C: PDB Molecule: 2-c-methyl-d-erythritol 4-phosphate cytidyltransferase; PDBTitle: structure of mtb apo 2-c-methyl-d-erythritol 4-phosphate2 cytidyltransferase (ispd)
46	c2ywra	Alignment	not modelled	72.6	12	PDB header: transferase Chain: A: PDB Molecule: phosphoribosylglycinamide formyltransferase; PDBTitle: crystal structure of gar transformylase from aquifex2 aeolicus
47	c1zctB	Alignment	not modelled	72.4	10	PDB header: transferase Chain: B: PDB Molecule: glycogenin-1; PDBTitle: structure of glycogenin truncated at residue 270 in a2 complex with udp
48	d1ll2a	Alignment	not modelled	67.6	10	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: Glycogenin
49	d1jkxa	Alignment	not modelled	63.1	8	Fold: Formyltransferase Superfamily: Formyltransferase Family: Formyltransferase
50	d1o6ca	Alignment	not modelled	62.6	9	Fold: UDP-Glycosyltransferase/glycogen phosphorylase Superfamily: UDP-Glycosyltransferase/glycogen phosphorylase Family: UDP-N-acetylglucosamine 2-epimerase
51	d1mc3a	Alignment	not modelled	62.1	8	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: glucose-1-phosphate thymidyltransferase
52	d1iina	Alignment	not modelled	61.8	9	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: glucose-1-phosphate thymidyltransferase
53	d2oi6a2	Alignment	not modelled	57.6	16	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: UDP-glucose pyrophosphorylase

54	d1jyka	Alignment	not modelled	57.2	15	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: Cytidyltransferase
55	d1qwja	Alignment	not modelled	55.1	8	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: Cytidyltransferase
56	c2qh5B	Alignment	not modelled	54.4	12	PDB header: isomerase Chain: B: PDB Molecule: mannose-6-phosphate isomerase; PDBTitle: crystal structure of mannose-6-phosphate isomerase from helicobacter2 pylori
57	c2xmhB	Alignment	not modelled	53.7	16	PDB header: transferase Chain: B: PDB Molecule: cpt-inositol-1-phosphate cytidyltransferase; PDBTitle: the x-ray structure of cpt:inositol-1-phosphate2 cytidyltransferase from archaeoglobus fulgidus
58	c3tqdA	Alignment	not modelled	47.0	19	PDB header: transferase Chain: A: PDB Molecule: 3-deoxy-manno-octulosonate cytidyltransferase; PDBTitle: structure of the 3-deoxy-d-manno-octulosonate cytidyltransferase2 (kdsb) from coxiella burnetii
59	d1eyra	Alignment	not modelled	44.6	5	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: Cytidyltransferase
60	c2j0bA	Alignment	not modelled	43.7	14	PDB header: transferase Chain: A: PDB Molecule: beta-1,3-n-acetylglucosaminyltransferase manic fringe; PDBTitle: structure of the catalytic domain of mouse manic fringe in2 complex with udp and manganese
61	c2x5sB	Alignment	not modelled	43.2	11	PDB header: transferase Chain: B: PDB Molecule: mannose-1-phosphate guanylyltransferase; PDBTitle: crystal structure of t. maritima gdp-mannose2 pyrophosphorylase in apo state.
62	d1e5ka	Alignment	not modelled	40.1	11	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: Molybdenum cofactor biosynthesis protein MobA
63	c3brkX	Alignment	not modelled	39.8	11	PDB header: transferase Chain: X: PDB Molecule: glucose-1-phosphate adenyllyltransferase; PDBTitle: crystal structure of adp-glucose pyrophosphorylase from agrobacterium tumefaciens
64	d2nx2a1	Alignment	not modelled	39.4	12	Fold: MCP/YpsA-like Superfamily: MCP/YpsA-like Family: YpsA-like
65	c3cgxA	Alignment	not modelled	38.1	10	PDB header: transferase Chain: A: PDB Molecule: putative nucleotide-diphospho-sugar transferase; PDBTitle: crystal structure of putative nucleotide-diphospho-sugar transferase2 (yp_389115.1) from desulfovibrio desulfuricans g20 at 1.90 a3 resolution
66	c2vshB	Alignment	not modelled	37.1	11	PDB header: transferase Chain: B: PDB Molecule: 2-c-methyl-d-erythritol 4-phosphate PDBTitle: synthesis of cdp-activated ribitol for teichoic acid2 precursors in streptococcus pneumoniae
67	c2we9A	Alignment	not modelled	33.7	14	PDB header: unknown function Chain: A: PDB Molecule: moba-related protein; PDBTitle: crystal structure of rv0371c from mycobacterium2 tuberculosis h37rv
68	d2fcja1	Alignment	not modelled	32.2	13	Fold: Toprim domain Superfamily: Toprim domain Family: Toprim domain
69	d1r6wa1	Alignment	not modelled	32.1	8	Fold: TIM beta/alpha-barrel Superfamily: Enolase C-terminal domain-like Family: D-glucarate dehydratase-like
70	c2c0nA	Alignment	not modelled	30.8	21	PDB header: viral protein/transferase Chain: A: PDB Molecule: a197; PDBTitle: crystal structure of a197 from stiv
71	c2e3dB	Alignment	not modelled	30.6	14	PDB header: transferase Chain: B: PDB Molecule: utp-glucose-1-phosphate uridylyltransferase; PDBTitle: crystal structure of e. coli glucose-1-phosphate2 uridylyltransferase
72	c3tqrA	Alignment	not modelled	30.2	12	PDB header: transferase Chain: A: PDB Molecule: phosphoribosylglycinamide formyltransferase; PDBTitle: structure of the phosphoribosylglycinamide formyltransferase (purn) in2 complex with ches from coxiella burnetii
73	d1vkpa	Alignment	not modelled	30.0	11	Fold: Pentein, beta/alpha-propeller Superfamily: Pentein Family: Porphyromonas-type peptidylarginine deiminase
74	c2yswB	Alignment	not modelled	28.6	11	PDB header: lyase Chain: B: PDB Molecule: 3-dehydroquinate dehydratase; PDBTitle: crystal structure of the 3-dehydroquinate dehydratase from aquifex2 aeolicus vF5
75	c3ot5D	Alignment	not modelled	27.9	13	PDB header: isomerase Chain: D: PDB Molecule: udp-n-acetylglucosamine 2-epimerase; PDBTitle: 2.2 angstrom resolution crystal structure of putative udp-n-2 acetylglucosamine 2-epimerase from listeria monocytogenes
76	d1g97a2	Alignment	not modelled	27.5	13	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: UDP-glucose pyrophosphorylase
77	d2bu3a1	Alignment	not modelled	26.6	9	Fold: Cysteine proteinases Superfamily: Cysteine proteinases Family: Phytochelatin synthase

78	c3f1cB		Alignment	not modelled	26.6	8	PDB header: transferase Chain: B: PDB Molecule: putative 2-c-methyl-d-erythritol 4-phosphate PDBTitle: crystal structure of 2-c-methyl-d-erythritol 4-phosphate2 cytidylyltransferase from <i>listeria monocytogenes</i>
79	c2e8bA		Alignment	not modelled	26.2	17	PDB header: biosynthetic protein Chain: A: PDB Molecule: probable molybdopterin-guanine dinucleotide biosynthesis PDBTitle: crystal structure of the putative protein (aq1419) from <i>aquifex2 aeolicus vf5</i>
80	c3rsbB		Alignment	not modelled	25.5	11	PDB header: transferase Chain: B: PDB Molecule: adenosylcobinamide-phosphate guanylyltransferase; PDBTitle: structure of the archaeal gtp:adocbi-p guanylyltransferase (coby) from2 <i>methanocaldococcus jannaschii</i>
81	c3dcjA		Alignment	not modelled	24.2	8	PDB header: transferase Chain: A: PDB Molecule: probable 5'-phosphoribosylglycinamide PDBTitle: crystal structure of glycynamide formyltransferase (purn)2 from mycobacterium tuberculosis in complex with 5-methyl-5,3,6,7,8-tetrahydrofolic acid derivative
82	c2cu2A		Alignment	not modelled	23.5	14	PDB header: transferase Chain: A: PDB Molecule: putative mannose-1-phosphate guanylyl transferase; PDBTitle: crystal structure of mannose-1-phosphate geranyltransferase from2 <i>thermus thermophilus hb8</i>
83	c2bmxB		Alignment	not modelled	19.9	14	PDB header: oxidoreductase Chain: B: PDB Molecule: alkyl hydroperoxidase c; PDBTitle: mycobacterium tuberculosis ahpc
84	d1t0ia		Alignment	not modelled	19.5	20	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: NADPH-dependent FMN reductase
85	c2hyxA		Alignment	not modelled	17.8	9	PDB header: unknown function Chain: A: PDB Molecule: protein dipz; PDBTitle: structure of the c-terminal domain of dipz from mycobacterium2 tuberculosis
86	c3c3yB		Alignment	not modelled	17.6	11	PDB header: transferase Chain: B: PDB Molecule: o-methyltransferase; PDBTitle: crystal structure of pfomt, phenylpropanoid and flavonoid o-2 methyltransferase from m. crystallinum
87	d1xkna		Alignment	not modelled	16.6	16	Fold: Pentein, beta/alpha-propeller Superfamily: Pentein Family: Porphyromonas-type peptidylarginine deiminase
88	d1di0a		Alignment	not modelled	15.1	24	Fold: Lumazine synthase Superfamily: Lumazine synthase Family: Lumazine synthase
89	c2btwA		Alignment	not modelled	14.7	9	PDB header: transferase Chain: A: PDB Molecule: alr0975 protein; PDBTitle: crystal structure of alr0975
90	d1h7ea		Alignment	not modelled	14.1	12	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: Cytidylyltransferase
91	d1z0sa1		Alignment	not modelled	13.8	17	Fold: NAD kinase/diacylglycerol kinase-like Superfamily: NAD kinase/diacylglycerol kinase-like Family: NAD kinase-like
92	c3qmzA		Alignment	not modelled	13.7	12	PDB header: motor protein Chain: A: PDB Molecule: cytoplasmic dynein heavy chain; PDBTitle: crystal structure of the cytoplasmic dynein heavy chain motor domain
93	c3io3A		Alignment	not modelled	13.4	13	PDB header: chaperone Chain: A: PDB Molecule: deha2d07832p; PDBTitle: get3 with adp from d. hansenii in closed form
94	d2bmx1		Alignment	not modelled	12.9	14	Fold: Thioredoxin fold Superfamily: Thioredoxin-like Family: Glutathione peroxidase-like
95	c3kyiB		Alignment	not modelled	12.7	17	PDB header: transferase Chain: B: PDB Molecule: chey6 protein; PDBTitle: crystal structure of the phosphorylated p1 domain of chea3 in complex2 with chey6 from r. sphaeroides
96	c3bzba		Alignment	not modelled	12.2	9	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of uncharacterized protein cmq451c from the2 primitive red alga cyanodiscophyceae merolae
97	d2cu2a2		Alignment	not modelled	12.0	14	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: mannose-1-phosphate guanylyl transferase
98	d1k3ra2		Alignment	not modelled	11.9	15	Fold: alpha/beta knot Superfamily: alpha/beta knot Family: Hypothetical protein MTH1 (MT0001), dimerisation domain
99	c3h0ka		Alignment	not modelled	11.8	8	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: upf0200 protein sso1041; PDBTitle: crystal structure of an adenylated kinase related protein from2 <i>sulfolobus solfataricus</i> to 3.25a