

# Phyre<sup>2</sup>

|               |                             |
|---------------|-----------------------------|
| Email         | i.a.kelley@imperial.ac.uk   |
| Description   | P0A9C3                      |
| Date          | Thu Jan 5 11:09:52 GMT 2012 |
| Unique Job ID | 6c473b93ef80daf2            |

Detailed template information

| #  | Template                | Alignment Coverage  | 3D Model  | Confidence | % i.d. | Template Information  |
|----|-------------------------|---|---|------------|--------|---|
| 1  | <a href="#">d1so0a_</a> |    |    | 100.0      | 37     | <b>Fold:</b> Supersandwich<br><b>Superfamily:</b> Galactose mutarotase-like<br><b>Family:</b> Aldose 1-epimerase (matarotate)   |
| 2  | <a href="#">c1z45A_</a> |    |    | 100.0      | 25     | <b>PDB header:</b> isomerase<br><b>Chain:</b> A: <b>PDB Molecule:</b> gal10 bifunctional protein;<br><b>PDBTitle:</b> crystal structure of the gal10 fusion protein galactose2 mutarotase/udp-galactose 4-epimerase from saccharomyces3 cerevisiae complexed with nad, udp-glucose, and galactose   |
| 3  | <a href="#">d1lura_</a> |    |    | 100.0      | 33     | <b>Fold:</b> Supersandwich<br><b>Superfamily:</b> Galactose mutarotase-like<br><b>Family:</b> Aldose 1-epimerase (matarotate)   |
| 4  | <a href="#">d1nsza_</a> |    |    | 100.0      | 31     | <b>Fold:</b> Supersandwich<br><b>Superfamily:</b> Galactose mutarotase-like<br><b>Family:</b> Aldose 1-epimerase (matarotate)   |
| 5  | <a href="#">c3imhB_</a> |  |  | 100.0      | 34     | <b>PDB header:</b> isomerase<br><b>Chain:</b> B: <b>PDB Molecule:</b> galactose-1-epimerase;<br><b>PDBTitle:</b> crystal structure of galactose 1-epimerase from lactobacillus2 acidophilus ncfm  |
| 6  | <a href="#">d1z45a1</a> |  |  | 100.0      | 25     | <b>Fold:</b> Supersandwich<br><b>Superfamily:</b> Galactose mutarotase-like<br><b>Family:</b> Aldose 1-epimerase (matarotate)   |
| 7  | <a href="#">clygaA_</a> |  |  | 100.0      | 26     | <b>PDB header:</b> isomerase<br><b>Chain:</b> A: <b>PDB Molecule:</b> hypothetical 37.9 kda protein in bio3-hxt17<br><b>PDBTitle:</b> crystal structure of saccharomyces cerevisiae yn9a protein,2 new york structural genomics consortium  |
| 8  | <a href="#">c3os7D_</a> |  |  | 100.0      | 14     | <b>PDB header:</b> isomerase<br><b>Chain:</b> D: <b>PDB Molecule:</b> galactose mutarotase-like protein;<br><b>PDBTitle:</b> crystal structure of a galactose mutarotase-like protein (ca_c0697)2 from clostridium acetobutylicum at 1.80 a resolution  |
| 9  | <a href="#">c3os7B_</a> |  |  | 100.0      | 14     | <b>PDB header:</b> isomerase<br><b>Chain:</b> B: <b>PDB Molecule:</b> galactose mutarotase-like protein;<br><b>PDBTitle:</b> crystal structure of a galactose mutarotase-like protein (ca_c0697)2 from clostridium acetobutylicum at 1.80 a resolution  |
| 10 | <a href="#">c3nreB_</a> |  |  | 100.0      | 19     | <b>PDB header:</b> isomerase<br><b>Chain:</b> B: <b>PDB Molecule:</b> aldose 1-epimerase;<br><b>PDBTitle:</b> crystal structure of a putative aldose 1-epimerase (b2544) from escherichia coli k12 at 1.59 a resolution   |
| 11 | <a href="#">c3dcda_</a> |  |  | 100.0      | 19     | <b>PDB header:</b> structural genomics, unknown function<br><b>Chain:</b> A: <b>PDB Molecule:</b> galactose mutarotase related enzyme;<br><b>PDBTitle:</b> x-ray structure of the galactose mutarotase related enzyme q5fk7 from2 lactobacillus acidophilus at the resolution 1.9a. northeast3 structural genomics consortium target lar33. |

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|----|-------------------------|--|--------------|------|---|---|
| 12 | <a href="#">c3q1nA</a>  |  | 100.0        | 18   | <b>PDB header:</b> isomerase<br><b>Chain:</b> A: <b>PDB Molecule:</b> galactose mutarotase related enzyme;<br><b>PDBTitle:</b> crystal structure of a galactose mutarotase-like protein (lsei_2598)2 from lactobacillus casei atcc 334 at 1.61 a resolution                 |   |
| 13 | <a href="#">c3mwxA</a>  |  | 100.0        | 17   | <b>PDB header:</b> isomerase<br><b>Chain:</b> A: <b>PDB Molecule:</b> aldose 1-epimerase;<br><b>PDBTitle:</b> crystal structure of a putative galactose mutarotase (bsu18360) from2 bacillus subtilis at 1.45 a resolution  |   |
| 14 | <a href="#">c3k25B</a>  |  | 100.0        | 20   | <b>PDB header:</b> structural genomics, unknown function<br><b>Chain:</b> B: <b>PDB Molecule:</b> slr1438 protein;<br><b>PDBTitle:</b> crystal structure of slr1438 protein from synechocystis sp. pcc 6803,2 northeast structural genomics consortium target sgr112        |   |
| 15 | <a href="#">c2cisA</a>  |  | 100.0        | 15   | <b>PDB header:</b> isomerase<br><b>Chain:</b> A: <b>PDB Molecule:</b> hexose-6-phosphate mutarotase;<br><b>PDBTitle:</b> structure-based functional annotation: yeast ymr099c codes2 for a d-hexose-6-phosphate mutarotase. complex with3 tagatose-6-phosphate              |   |
| 16 | <a href="#">c2htbB</a>  |  | 100.0        | 16   | <b>PDB header:</b> isomerase<br><b>Chain:</b> B: <b>PDB Molecule:</b> putative enzyme related to aldose 1-epimerase;<br><b>PDBTitle:</b> crystal structure of a putative mutarotase (yead) from2 salmonella typhimurium in monoclinic form                                  |   |
| 17 | <a href="#">d1jova</a>  |  | 100.0        | 18   | <b>Fold:</b> Supersandwich<br><b>Superfamily:</b> Galactose mutarotase-like<br><b>Family:</b> Hypothetical protein HI1317   |   |
| 18 | <a href="#">c3ty1B</a>  |  | 99.9         | 13   | <b>PDB header:</b> isomerase<br><b>Chain:</b> B: <b>PDB Molecule:</b> hypothetical aldose 1-epimerase;<br><b>PDBTitle:</b> crystal structure of a hypothetical aldose 1-epimerase (kpn_04629)2 from klebsiella pneumoniae subsp. pneumoniae mgh 78578 at 1.90 a3 resolution |   |
| 19 | <a href="#">c3bs6B</a>  |  | 97.3         | 17   | <b>PDB header:</b> membrane protein, protein transport<br><b>Chain:</b> B: <b>PDB Molecule:</b> inner membrane protein oxaa;<br><b>PDBTitle:</b> 1.8 angstrom crystal structure of the periplasmic domain of2 the membrane insertase yidc                                   |   |
| 20 | <a href="#">c3blcB</a>  |  | 96.2         | 17   | <b>PDB header:</b> chaperone,protein transport<br><b>Chain:</b> B: <b>PDB Molecule:</b> inner membrane protein oxaa;<br><b>PDBTitle:</b> crystal structure of the periplasmic domain of the escherichia coli2 yidc  |   |
| 21 | <a href="#">c1so9A</a>  |  | not modelled | 59.9 | 24  | <b>PDB header:</b> metal transport<br><b>Chain:</b> A: <b>PDB Molecule:</b> cytochrome c oxidase assembly protein ctg;<br><b>PDBTitle:</b> solution structure of apocoxx11, 30 structures                     |
| 22 | <a href="#">d1so9a</a>  |  | not modelled | 59.9 | 24  | <b>Fold:</b> Ctag/Cox11<br><b>Superfamily:</b> Ctag/Cox11<br><b>Family:</b> Ctag/Cox11  |
| 23 | <a href="#">d1k1xa2</a> |  | not modelled | 45.1 | 13  | <b>Fold:</b> Supersandwich<br><b>Superfamily:</b> Galactose mutarotase-like<br><b>Family:</b> 4-alpha-glucanotransferase, C-terminal domain   |
| 24 | <a href="#">d1jz8a4</a> |  | not modelled | 19.0 | 20  | <b>Fold:</b> Supersandwich<br><b>Superfamily:</b> Galactose mutarotase-like<br><b>Family:</b> beta-Galactosidase, domain 5  |
| 25 | <a href="#">c2xn1B</a>  |  | not modelled | 18.6 | 12  | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> alpha-galactosidase;<br><b>PDBTitle:</b> structure of alpha-galactosidase from lactobacillus acidophilus ncfm2 with tris                |
| 26 | <a href="#">d2hkja2</a> |  | not modelled | 14.6 | 45  | <b>Fold:</b> Ribosomal protein S5 domain 2-like<br><b>Superfamily:</b> Ribosomal protein S5 domain 2-like<br><b>Family:</b> DNA gyrase/MutL, second domain  |
| 27 | <a href="#">c2zooA</a>  |  | not modelled | 14.0 | 17  | <b>PDB header:</b> oxidoreductase<br><b>Chain:</b> A: <b>PDB Molecule:</b> probable nitrite reductase;<br><b>PDBTitle:</b> crystal structure of nitrite reductase from pseudoalteromonas2 haloplanktis tac125 |
| 28 | <a href="#">d1f2ri</a>  |  | not modelled | 13.9 | 25  | <b>Fold:</b> beta-Grasp (ubiquitin-like)<br><b>Superfamily:</b> CAD & PB1 domains<br><b>Family:</b> CAD domain  |
|    |                         |  |              |      | <b>Fold:</b> beta-clip  |   |

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|----|--------------------------|-----------|--------------|------|----|---|
| 29 | <a href="#">d4ubpb</a>   | Alignment | not modelled | 12.8 | 18 | <b>Superfamily:</b> Urease, beta-subunit<br><b>Family:</b> Urease, beta-subunit   |
| 30 | <a href="#">d1oelal1</a> | Alignment | not modelled | 12.8 | 14 | <b>Fold:</b> Cupredoxin-like<br><b>Superfamily:</b> Cupredoxins<br><b>Family:</b> Multidomain cupredoxins   |
| 31 | <a href="#">d1e9ya1</a>  | Alignment | not modelled | 12.2 | 18 | <b>Fold:</b> beta-clip<br><b>Superfamily:</b> Urease, beta-subunit<br><b>Family:</b> Urease, beta-subunit   |
| 32 | <a href="#">d1ibxb_</a>  | Alignment | not modelled | 10.0 | 25 | <b>Fold:</b> beta-Grasp (ubiquitin-like)<br><b>Superfamily:</b> CAD & PBI domains<br><b>Family:</b> CAD domain  |
| 33 | <a href="#">c1ibxB_</a>  | Alignment | not modelled | 10.0 | 25 | <b>PDB header:</b> hydrolase/hydrolase inhibitor<br><b>Chain:</b> B: <b>PDB Molecule:</b> chimera of igg binding protein g and dna<br><b>PDBTitle:</b> nmr structure of dff40 and dff45 n-terminal domain complex   |
| 34 | <a href="#">d1c9fa_</a>  | Alignment | not modelled | 9.9  | 32 | <b>Fold:</b> beta-Grasp (ubiquitin-like)<br><b>Superfamily:</b> CAD & PBI domains<br><b>Family:</b> CAD domain  |
| 35 | <a href="#">d1q2la4</a>  | Alignment | not modelled | 9.9  | 29 | <b>Fold:</b> LuxS/MPP-like metallohydrolase<br><b>Superfamily:</b> LuxS/MPP-like metallohydrolase<br><b>Family:</b> MPP-like  |
| 36 | <a href="#">d1ejxb_</a>  | Alignment | not modelled | 9.5  | 17 | <b>Fold:</b> beta-clip<br><b>Superfamily:</b> Urease, beta-subunit<br><b>Family:</b> Urease, beta-subunit   |
| 37 | <a href="#">d1ibxa_</a>  | Alignment | not modelled | 9.3  | 21 | <b>Fold:</b> beta-Grasp (ubiquitin-like)<br><b>Superfamily:</b> CAD & PBI domains<br><b>Family:</b> CAD domain  |
| 38 | <a href="#">c2zf9D_</a>  | Alignment | not modelled | 8.9  | 6  | <b>PDB header:</b> structural protein<br><b>Chain:</b> D: <b>PDB Molecule:</b> scae cell-surface anchored scaffoldin protein;<br><b>PDBTitle:</b> crystal structure of a type iii cohesin module from the cellosomal2 scae cell-surface anchoring scaffoldin of ruminococcus flavefaciens |
| 39 | <a href="#">d1ndsa1</a>  | Alignment | not modelled | 8.1  | 17 | <b>Fold:</b> Cupredoxin-like<br><b>Superfamily:</b> Cupredoxins<br><b>Family:</b> Multidomain cupredoxins   |
| 40 | <a href="#">c3cw3A_</a>  | Alignment | not modelled | 8.0  | 16 | <b>PDB header:</b> oncoprotein<br><b>Chain:</b> A: <b>PDB Molecule:</b> absent in melanoma 1 protein;<br><b>PDBTitle:</b> crystal structure of aim1g1   |
| 41 | <a href="#">c2g8gA_</a>  | Alignment | not modelled | 7.2  | 40 | <b>PDB header:</b> virus<br><b>Chain:</b> A: <b>PDB Molecule:</b> capsid;<br><b>PDBTitle:</b> structurally mapping the diverse phenotype of adeno-2 associated virus serotype 4   |
| 42 | <a href="#">d1m53a1</a>  | Alignment | not modelled | 7.0  | 9  | <b>Fold:</b> Glycosyl hydrolase domain<br><b>Superfamily:</b> Glycosyl hydrolase domain<br><b>Family:</b> alpha-Amylases, C-terminal beta-sheet domain  |
| 43 | <a href="#">c3mi6A_</a>  | Alignment | not modelled | 6.5  | 13 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> alpha-galactosidase;<br><b>PDBTitle:</b> crystal structure of the alpha-galactosidase from lactobacillus2 brevis, northeast structural genomics consortium target lbr11.  |
| 44 | <a href="#">c3kieF_</a>  | Alignment | not modelled | 6.4  | 33 | <b>PDB header:</b> virus<br><b>Chain:</b> F: <b>PDB Molecule:</b> capsid protein vp1;<br><b>PDBTitle:</b> crystal structure of adeno-associated virus serotype 3b   |
| 45 | <a href="#">c1v06A_</a>  | Alignment | not modelled | 6.3  | 33 | <b>PDB header:</b> dna-binding protein<br><b>Chain:</b> A: <b>PDB Molecule:</b> hmg box-containing protein 1;<br><b>PDBTitle:</b> axh domain of the transcription factor hbp1 from m.musculus   |
| 46 | <a href="#">d1yq2a5</a>  | Alignment | not modelled | 6.2  | 25 | <b>Fold:</b> TIM beta/alpha-barrel<br><b>Superfamily:</b> (Trans)glycosidases<br><b>Family:</b> beta-glycanases   |
| 47 | <a href="#">c2x3bB_</a>  | Alignment | not modelled | 6.2  | 34 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> toxic extracellular endopeptidase;<br><b>PDBTitle:</b> asap1 inactive mutant e294a, an extracellular toxic zinc2 metalloendopeptidase   |
| 48 | <a href="#">c2kl8A_</a>  | Alignment | not modelled | 6.1  | 44 | <b>PDB header:</b> de novo protein<br><b>Chain:</b> A: <b>PDB Molecule:</b> or15;<br><b>PDBTitle:</b> solution nmr structure of de novo designed ferredoxin-like2 fold protein, northeast structural genomics consortium3 target or15   |
| 49 | <a href="#">c1wa1X_</a>  | Alignment | not modelled | 6.0  | 14 | <b>PDB header:</b> reductase<br><b>Chain:</b> X: <b>PDB Molecule:</b> dissimilatory copper-containing nitrite<br><b>PDBTitle:</b> crystal structure of h313q mutant of alcaligenes2 xylosoxidans nitrite reductase  |
| 50 | <a href="#">c3nttA_</a>  | Alignment | not modelled | 5.9  | 39 | <b>PDB header:</b> virus<br><b>Chain:</b> A: <b>PDB Molecule:</b> capsid protein;<br><b>PDBTitle:</b> structural insights of adeno-associated virus 5. a gene therapy vector2 for cystic fibrosis   |
| 51 | <a href="#">c3dqgC_</a>  | Alignment | not modelled | 5.9  | 11 | <b>PDB header:</b> chaperone<br><b>Chain:</b> C: <b>PDB Molecule:</b> heat shock 70 kda protein f;<br><b>PDBTitle:</b> peptide-binding domain of heat shock 70 kda protein f, mitochondrial2 precursor, from caenorhabditis elegans.  |
| 52 | <a href="#">d1s58a_</a>  | Alignment | not modelled | 5.5  | 29 | <b>Fold:</b> Nucleoplasmin-like/VP (viral coat and capsid proteins)<br><b>Superfamily:</b> ssDNA viruses<br><b>Family:</b> Parvoviridae-like VP   |
| 53 | <a href="#">c2eelA_</a>  | Alignment | not modelled | 5.4  | 22 | <b>PDB header:</b> apoptosis<br><b>Chain:</b> A: <b>PDB Molecule:</b> cell death activator cide-a;<br><b>PDBTitle:</b> solution structure of the cide-n domain of human cell death2 activator cide-a  |
| 54 | <a href="#">c3qgaD_</a>  | Alignment | not modelled | 5.4  | 17 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> D: <b>PDB Molecule:</b> fusion of urease beta and gamma subunits;<br><b>PDBTitle:</b> 3.0 a model of iron containing urease urea2b2 from helicobacter2 mustelae   |

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|----|-------------------------|--|-----------|--------------|-----|----|--|
| 55 | <a href="#">d1mzya1</a> |  | Alignment | not modelled | 5.3 | 14 | <b>Fold:</b> Cupredoxin-like<br><b>Superfamily:</b> Cupredoxins<br><b>Family:</b> Multidomain cupredoxins  |
| 56 | <a href="#">d1vlba2</a> |  | Alignment | not modelled | 5.3 | 14 | <b>Fold:</b> beta-Grasp (ubiquitin-like)<br><b>Superfamily:</b> 2Fe-2S ferredoxin-like<br><b>Family:</b> 2Fe-2S ferredoxin domains from multidomain proteins |