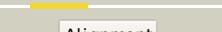
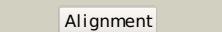
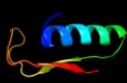
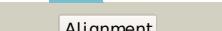
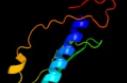
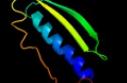
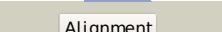
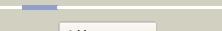


# Phyre<sup>2</sup>

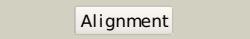
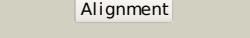
|               |                             |
|---------------|-----------------------------|
| Email         | i.a.kelley@imperial.ac.uk   |
| Description   | Q9JMS0                      |
| Date          | Thu Jan 5 12:37:55 GMT 2012 |
| Unique Job ID | 14ecc9e8115d68bb            |

Detailed template information

| #  | Template                | Alignment Coverage  | 3D Model  | Confidence | % i.d. | Template Information  |
|----|-------------------------|---|---|------------|--------|---|
| 1  | <a href="#">c3kd4A_</a> |  Alignment   |    | 79.8       | 19     | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A; <b>PDB Molecule:</b> putative protease;<br><b>PDBTitle:</b> crystal structure of a putative protease (bdi_1141) from2 parabacteroides distasonis atcc 8503 at 2.00 a resolution  |
| 2  | <a href="#">d2f4ma1</a> |  Alignment   |    | 38.4       | 17     | <b>Fold:</b> Cysteine proteinases<br><b>Superfamily:</b> Cysteine proteinases<br><b>Family:</b> Transglutaminase core   |
| 3  | <a href="#">c3jubA_</a> |  Alignment   |    | 37.9       | 14     | <b>PDB header:</b> transferase<br><b>Chain:</b> A; <b>PDB Molecule:</b> aig2-like domain-containing protein 1;<br><b>PDBTitle:</b> human gamma-glutamylamine cyclotransferase   |
| 4  | <a href="#">d1rq0a_</a> |  Alignment   |    | 34.5       | 16     | <b>Fold:</b> Release factor<br><b>Superfamily:</b> Release factor<br><b>Family:</b> Release factor  |
| 5  | <a href="#">c1zbtA_</a> |  Alignment |  | 29.2       | 19     | <b>PDB header:</b> translation<br><b>Chain:</b> A; <b>PDB Molecule:</b> peptide chain release factor 1;<br><b>PDBTitle:</b> crystal structure of peptide chain release factor 1 (rf-1) (smu.1085)2 from streptococcus mutans at 2.34 a resolution                             |
| 6  | <a href="#">d1gqea_</a> |  Alignment |  | 28.1       | 20     | <b>Fold:</b> Release factor<br><b>Superfamily:</b> Release factor<br><b>Family:</b> Release factor  |
| 7  | <a href="#">d2b3tb1</a> |  Alignment |  | 26.2       | 17     | <b>Fold:</b> Release factor<br><b>Superfamily:</b> Release factor<br><b>Family:</b> Release factor  |
| 8  | <a href="#">c3u7ja_</a> |  Alignment |  | 22.1       | 29     | <b>PDB header:</b> isomerase<br><b>Chain:</b> A; <b>PDB Molecule:</b> ribose-5-phosphate isomerase a;<br><b>PDBTitle:</b> crystal structure of ribose-5-phosphate isomerase a from burkholderia2 thailandensis  |
| 9  | <a href="#">c3nzlA_</a> |  Alignment |  | 20.4       | 30     | <b>PDB header:</b> transcription<br><b>Chain:</b> A; <b>PDB Molecule:</b> dna-binding protein satb1;<br><b>PDBTitle:</b> crystal structure of the n-terminal domain of dna-binding protein2 satb1 from homo sapiens, northeast structural genomics consortium3 target hr4435b |
| 10 | <a href="#">c3necD_</a> |  Alignment |  | 19.8       | 29     | <b>PDB header:</b> actin-binding protein<br><b>Chain:</b> D; <b>PDB Molecule:</b> inflammatory profilin;<br><b>PDBTitle:</b> crystal structure of toxoplasma gondii profilin  |
| 11 | <a href="#">d1vkba_</a> |  Alignment |  | 17.7       | 10     | <b>Fold:</b> Gamma-glutamyl cyclotransferase-like<br><b>Superfamily:</b> Gamma-glutamyl cyclotransferase-like<br><b>Family:</b> Gamma-glutamyl cyclotransferase-like  |

|    |                         |  |              |      |    |  |
|----|-------------------------|--|--------------|------|----|--|
| 12 | <a href="#">c3h25A_</a> |  |              | 17.5 | 38 | <b>PDB header:</b> replication/dna<br><b>Chain:</b> A: <b>PDB Molecule:</b> replication protein b;<br><b>PDBTitle:</b> crystal structure of the catalytic domain of primase repb' in complex2 with initiator dna   |
| 13 | <a href="#">c2ihr1_</a> |  |              | 15.4 | 12 | <b>PDB header:</b> translation<br><b>Chain:</b> 1: <b>PDB Molecule:</b> peptide chain release factor 2;<br><b>PDBTitle:</b> rf2 of thermus thermophilus  |
| 14 | <a href="#">c3bg4D_</a> |  |              | 13.7 | 40 | <b>PDB header:</b> hydrolase/hydrolase inhibitor<br><b>Chain:</b> D: <b>PDB Molecule:</b> guamerin;<br><b>PDBTitle:</b> the crystal structure of guamerin in complex with2 chymotrypsin and the development of an elastase-specific3 inhibitor   |
| 15 | <a href="#">c3d5cX_</a> |  |              | 13.0 | 15 | <b>PDB header:</b> ribosome<br><b>Chain:</b> X: <b>PDB Molecule:</b> peptide chain release factor 1;<br><b>PDBTitle:</b> structural basis for translation termination on the 70s ribosome. this2 file contains the 30s subunit, release factor 1 (rf1), two trna, and3 mrna molecules of the second 70s ribosome. the entire crystal4 structure contains two 70s ribosomes as described in remark 400. |
| 16 | <a href="#">c2z8tX_</a> |  |              | 12.8 | 14 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> X: <b>PDB Molecule:</b> protein-glutaminase;<br><b>PDBTitle:</b> crystal structure of protein-glutaminase of c.proteolyticum2 strain 9670  |
| 17 | <a href="#">c3d9wA_</a> |  |              | 12.2 | 14 | <b>PDB header:</b> transferase<br><b>Chain:</b> A: <b>PDB Molecule:</b> putative acetyltransferase;<br><b>PDBTitle:</b> crystal structure analysis of nocardia farcinica arylamine2 n-acetyltransferase  |
| 18 | <a href="#">c3imkA_</a> |  |              | 12.1 | 35 | <b>PDB header:</b> metal binding protein<br><b>Chain:</b> A: <b>PDB Molecule:</b> putative molybdenum carrier protein;<br><b>PDBTitle:</b> crystal structure of putative molybdenum carrier protein (yp_461806.1)2 from syntrophus aciditrophicus sb at 1.45 a resolution  |
| 19 | <a href="#">d1ozha2</a> |  |              | 11.9 | 15 | <b>Fold:</b> Thiamin diphosphate-binding fold (THDP-binding)<br><b>Superfamily:</b> Thiamin diphosphate-binding fold (THDP-binding)<br><b>Family:</b> Pyruvate oxidase and decarboxylase Pyr module  |
| 20 | <a href="#">c2kp7A_</a> |  |              | 11.2 | 19 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> crossover junction endonuclease mus81;<br><b>PDBTitle:</b> solution nmr structure of the mus81 n-terminal hhh.2 northeast structural genomics consortium target mmt1a  |
| 21 | <a href="#">d1f2ka_</a> |  | not modelled | 10.7 | 26 | <b>Fold:</b> Profilin-like<br><b>Superfamily:</b> Profilin (actin-binding protein)<br><b>Family:</b> Profilin (actin-binding protein)  |
| 22 | <a href="#">d1x3za1</a> |  | not modelled | 10.5 | 20 | <b>Fold:</b> Cysteine proteinases<br><b>Superfamily:</b> Cysteine proteinases<br><b>Family:</b> Transglutaminase core  |
| 23 | <a href="#">d2r4qa1</a> |  | not modelled | 10.1 | 21 | <b>Fold:</b> Phosphotyrosine protein phosphatases I-like<br><b>Superfamily:</b> PTS system IIB component-like<br><b>Family:</b> PTS system, Fructose specific IIB subunit-like   |
| 24 | <a href="#">d1hn6a_</a> |  | not modelled | 9.7  | 54 | <b>Fold:</b> Apical membrane antigen 1<br><b>Superfamily:</b> Apical membrane antigen 1<br><b>Family:</b> Apical membrane antigen 1  |
| 25 | <a href="#">d1pnea_</a> |  | not modelled | 9.3  | 9  | <b>Fold:</b> Profilin-like<br><b>Superfamily:</b> Profilin (actin-binding protein)<br><b>Family:</b> Profilin (actin-binding protein)  |
| 26 | <a href="#">d1bx7a_</a> |  | not modelled | 9.0  | 40 | <b>Fold:</b> Knottins (small inhibitors, toxins, lectins)<br><b>Superfamily:</b> Leech antihemostatic proteins<br><b>Family:</b> Huristasin-like   |
| 27 | <a href="#">c3rq4A_</a> |  | not modelled | 8.8  | 18 | <b>PDB header:</b> transferase<br><b>Chain:</b> A: <b>PDB Molecule:</b> histone-lysine n-methyltransferase suv420h2;<br><b>PDBTitle:</b> crystal structure of suppressor of variegation 4-20 homolog 2   |
| 28 | <a href="#">d2hlya1</a> |  | not modelled | 8.4  | 20 | <b>Fold:</b> Cysteine proteinases<br><b>Superfamily:</b> Cysteine proteinases<br><b>Family:</b> Atu2299-like   |
|    |                         |  |              |      |    | <b>Fold:</b> Profilin-like   |

|    |                         |           |              |     |    |  |
|----|-------------------------|-----------|--------------|-----|----|--|
| 29 | <a href="#">d1acfA</a>  | Alignment | not modelled | 8.2 | 26 | <b>Superfamily:</b> Profilin (actin-binding protein)<br><b>Family:</b> Profilin (actin-binding protein)  |
| 30 | <a href="#">c3pifD</a>  | Alignment | not modelled | 8.1 | 14 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> D: <b>PDB Molecule:</b> 5'->3' exoribonuclease (xrn1);<br><b>PDBTitle:</b> crystal structure of the 5'->3' exoribonuclease xrn1, e178q mutant in 2 complex with manganese  |
| 31 | <a href="#">d3nula</a>  | Alignment | not modelled | 8.0 | 32 | <b>Fold:</b> Profilin-like<br><b>Superfamily:</b> Profilin (actin-binding protein)<br><b>Family:</b> Profilin (actin-binding protein)  |
| 32 | <a href="#">d1cqaa</a>  | Alignment | not modelled | 8.0 | 27 | <b>Fold:</b> Profilin-like<br><b>Superfamily:</b> Profilin (actin-binding protein)<br><b>Family:</b> Profilin (actin-binding protein)  |
| 33 | <a href="#">d1brza</a>  | Alignment | not modelled | 8.0 | 19 | <b>Fold:</b> Knottins (small inhibitors, toxins, lectins)<br><b>Superfamily:</b> Scorpion toxin-like<br><b>Family:</b> Plant defensins   |
| 34 | <a href="#">d1g71a</a>  | Alignment | not modelled | 7.8 | 22 | <b>Fold:</b> Prim-pol domain<br><b>Superfamily:</b> Prim-pol domain<br><b>Family:</b> Pria-like  |
| 35 | <a href="#">d2pbdp1</a> | Alignment | not modelled | 7.7 | 9  | <b>Fold:</b> Profilin-like<br><b>Superfamily:</b> Profilin (actin-binding protein)<br><b>Family:</b> Profilin (actin-binding protein)  |
| 36 | <a href="#">d2c1ha1</a> | Alignment | not modelled | 7.3 | 21 | <b>Fold:</b> TIM beta/alpha-barrel<br><b>Superfamily:</b> Aldolase<br><b>Family:</b> 5-aminolaevulinate dehydratase, ALAD (porphobilinogen synthase)   |
| 37 | <a href="#">d1g5ua</a>  | Alignment | not modelled | 7.3 | 27 | <b>Fold:</b> Profilin-like<br><b>Superfamily:</b> Profilin (actin-binding protein)<br><b>Family:</b> Profilin (actin-binding protein)  |
| 38 | <a href="#">d2r48a1</a> | Alignment | not modelled | 7.3 | 26 | <b>Fold:</b> Phosphotyrosine protein phosphatases I-like<br><b>Superfamily:</b> PTS system IIB component-like<br><b>Family:</b> PTS system, Fructose specific IIB subunit-like   |
| 39 | <a href="#">c3dava</a>  | Alignment | not modelled | 7.2 | 26 | <b>PDB header:</b> protein binding<br><b>Chain:</b> A: <b>PDB Molecule:</b> profilin;<br><b>PDBTitle:</b> schizosaccharomyces pombe profilin crystallized from sodium2 formate   |
| 40 | <a href="#">d1v30a</a>  | Alignment | not modelled | 6.9 | 6  | <b>Fold:</b> Gamma-glutamyl cyclotransferase-like<br><b>Superfamily:</b> Gamma-glutamyl cyclotransferase-like<br><b>Family:</b> Gamma-glutamyl cyclotransferase-like   |
| 41 | <a href="#">c3enpA</a>  | Alignment | not modelled | 6.8 | 24 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> tp53rk-binding protein;<br><b>PDBTitle:</b> crystal structure of human cgi121  |
| 42 | <a href="#">d1ejab</a>  | Alignment | not modelled | 6.8 | 40 | <b>Fold:</b> Knottins (small inhibitors, toxins, lectins)<br><b>Superfamily:</b> Leech antihemostatic proteins<br><b>Family:</b> Huristasin-like   |
| 43 | <a href="#">d1s7ja</a>  | Alignment | not modelled | 6.7 | 12 | <b>Fold:</b> Diaminopimelate epimerase-like<br><b>Superfamily:</b> Diaminopimelate epimerase-like<br><b>Family:</b> PhzC/PhzF-like   |
| 44 | <a href="#">d1ypra</a>  | Alignment | not modelled | 6.6 | 26 | <b>Fold:</b> Profilin-like<br><b>Superfamily:</b> Profilin (actin-binding protein)<br><b>Family:</b> Profilin (actin-binding protein)  |
| 45 | <a href="#">d1l6sa</a>  | Alignment | not modelled | 6.0 | 21 | <b>Fold:</b> TIM beta/alpha-barrel<br><b>Superfamily:</b> Aldolase<br><b>Family:</b> 5-aminolaevulinate dehydratase, ALAD (porphobilinogen synthase)   |
| 46 | <a href="#">d1umga</a>  | Alignment | not modelled | 5.9 | 31 | <b>Fold:</b> Sulfolobus fructose-1,6-bisphosphatase-like<br><b>Superfamily:</b> Sulfolobus fructose-1,6-bisphosphatase-like<br><b>Family:</b> Sulfolobus fructose-1,6-bisphosphatase-like  |
| 47 | <a href="#">d1o8bb1</a> | Alignment | not modelled | 5.6 | 25 | <b>Fold:</b> NagB/RpiA/CoA transferase-like<br><b>Superfamily:</b> NagB/RpiA/CoA transferase-like<br><b>Family:</b> D-ribose-5-phosphate isomerase (RpiA), catalytic domain  |
| 48 | <a href="#">d2zgwa2</a> | Alignment | not modelled | 5.6 | 14 | <b>Fold:</b> Class II aaRS and biotin synthetases<br><b>Superfamily:</b> Class II aaRS and biotin synthetases<br><b>Family:</b> Biotin holoenzyme synthetase   |
| 49 | <a href="#">d1gzga</a>  | Alignment | not modelled | 5.6 | 25 | <b>Fold:</b> TIM beta/alpha-barrel<br><b>Superfamily:</b> Aldolase<br><b>Family:</b> 5-aminolaevulinate dehydratase, ALAD (porphobilinogen synthase)   |
| 50 | <a href="#">c2kl8A</a>  | Alignment | not modelled | 5.5 | 50 | <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                                |
| 51 | <a href="#">d1l0nk</a>  | Alignment | not modelled | 5.5 | 50 | <b>Fold:</b> Single transmembrane helix<br><b>Superfamily:</b> Subunit XI (6.4 kDa protein) of cytochrome bc1 complex (Ubiquinol-cytochrome c reductase)<br><b>Family:</b> Subunit XI (6.4 kDa protein) of cytochrome bc1 complex (Ubiquinol-cytochrome c reductase) |
| 52 | <a href="#">c3kewA</a>  | Alignment | not modelled | 5.5 | 27 | <b>PDB header:</b> transferase<br><b>Chain:</b> A: <b>PDB Molecule:</b> dhha1 domain protein;<br><b>PDBTitle:</b> crystal structure of probable alanyl-tRNA-synthetase from clostridium2 perfringens   |
| 53 | <a href="#">d2e1ba1</a> | Alignment | not modelled | 5.4 | 47 | <b>Fold:</b> Reductase/isomerase/elongation factor common domain<br><b>Superfamily:</b> Translation proteins<br><b>Family:</b> Alax-M N-terminal domain-like   |
| 54 | <a href="#">d1qy9a1</a> | Alignment | not modelled | 5.3 | 14 | <b>Fold:</b> Diaminopimelate epimerase-like<br><b>Superfamily:</b> Diaminopimelate epimerase-like<br><b>Family:</b> PhzC/PhzF-like   |
| 55 | <a href="#">c3kwmC</a>  | Alignment | not modelled | 5.2 | 24 | <b>PDB header:</b> isomerase<br><b>Chain:</b> C: <b>PDB Molecule:</b> ribose-5-phosphate isomerase a;<br><b>PDBTitle:</b> crystal structure of ribose-5-isomerase a  |

|    |                         |   |           |              |     |    |   |
|----|-------------------------|---|-----------|--------------|-----|----|---|
| 56 | <a href="#">c2kyrA</a>  |  | Alignment | not modelled | 5.2 | 19 | <b>PDB header:</b> transferase<br><b>Chain:</b> A; <b>PDB Molecule:</b> fructose-like phosphotransferase enzyme iib component 1;<br><b>PDBTitle:</b> solution structure of enzyme iib subunit of pts system from2 escherichia coli k12. northeast structural genomics consortium target3 er315/ontario center for structural proteomics target ec0544 |
| 57 | <a href="#">d2ifaa1</a> |  | Alignment | not modelled | 5.1 | 10 | <b>Fold:</b> FMN-dependent nitroreductase-like<br><b>Superfamily:</b> FMN-dependent nitroreductase-like<br><b>Family:</b> NADH oxidase/flavin reductase   |
| 58 | <a href="#">c3mp2A</a>  |  | Alignment | not modelled | 5.0 | 13 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A; <b>PDB Molecule:</b> non-structural protein 3;<br><b>PDBTitle:</b> crystal structure of transmissible gastroenteritis virus papain-like2 protease 1  |