

# Phyre<sup>2</sup>

|               |                               |
|---------------|-------------------------------|
| Email         | mdejesus@rockefeller.edu      |
| Description   | RVBD2823c_(-)_3129354_3131783 |
| Date          | Wed Aug 7 12:50:48 BST 2019   |
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Detailed template information

| #  | Template               | Alignment Coverage  | 3D Model  | Confidence | % i.d. | Template Information   |
|----|------------------------|---|---|------------|--------|--|
| 1  | <a href="#">c6ifnA</a> |  Alignment   |    | 100.0      | 44     | <b>PDB header:</b> rna binding protein<br><b>Chain:</b> A; <b>PDB Molecule:</b> type iii-a crispr-associated protein csm1;<br><b>PDBTitle:</b> crystal structure of type iii-a crispr csm complex  |
| 2  | <a href="#">c6iqwA</a> |  Alignment   |    | 100.0      | 27     | <b>PDB header:</b> rna binding protein/rna<br><b>Chain:</b> A; <b>PDB Molecule:</b> csm1;<br><b>PDBTitle:</b> cryo-em structure of csm effector complex  |
| 3  | <a href="#">c4uw2A</a> |  Alignment   |    | 100.0      | 29     | <b>PDB header:</b> immune system<br><b>Chain:</b> A; <b>PDB Molecule:</b> csm1;<br><b>PDBTitle:</b> crystal structure of csm1 in t.onnurineus  |
| 4  | <a href="#">c4w8yA</a> |  Alignment   |   | 100.0      | 19     | <b>PDB header:</b> rna binding protein<br><b>Chain:</b> A; <b>PDB Molecule:</b> crispr system cmr subunit cmr2;<br><b>PDBTitle:</b> structure of full length cmr2 from pyrococcus furiosus (manganese2 bound form)                               |
| 5  | <a href="#">c3ungC</a> |  Alignment |  | 100.0      | 20     | <b>PDB header:</b> unknown function<br><b>Chain:</b> C; <b>PDB Molecule:</b> cmr2dhd;<br><b>PDBTitle:</b> structure of the cmr2 subunit of the crispr rna silencing complex  |
| 6  | <a href="#">c4uw2C</a> |  Alignment |  | 100.0      | 30     | <b>PDB header:</b> immune system<br><b>Chain:</b> C; <b>PDB Molecule:</b> csm1;<br><b>PDBTitle:</b> crystal structure of csm1 in t.onnurineus  |
| 7  | <a href="#">c3breA</a> |  Alignment |  | 98.5       | 19     | <b>PDB header:</b> signaling protein<br><b>Chain:</b> A; <b>PDB Molecule:</b> probable two-component response regulator;<br><b>PDBTitle:</b> crystal structure of p.aeruginosa pa3702  |
| 8  | <a href="#">c1w25B</a> |  Alignment |  | 98.4       | 20     | <b>PDB header:</b> signaling protein<br><b>Chain:</b> B; <b>PDB Molecule:</b> stalked-cell differentiation controlling protein;<br><b>PDBTitle:</b> response regulator pled in complex with c-digmp  |
| 9  | <a href="#">c5llxB</a> |  Alignment |  | 98.4       | 16     | <b>PDB header:</b> transferase<br><b>Chain:</b> B; <b>PDB Molecule:</b> diguanylate cyclase (ggdef) domain-containing protein;<br><b>PDBTitle:</b> bacteriophytochrome activated diguanylyl cyclase from idiomarina2 species a281 with gtp bound |
| 10 | <a href="#">c2o08B</a> |  Alignment |  | 98.4       | 17     | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B; <b>PDB Molecule:</b> bh1327 protein;<br><b>PDBTitle:</b> crystal structure of a putative hd superfamily hydrolase (bh1327) from2 bacillus halodurans at 1.90 a resolution                       |
| 11 | <a href="#">c3i5aA</a> |  Alignment |  | 98.4       | 22     | <b>PDB header:</b> signaling protein<br><b>Chain:</b> A; <b>PDB Molecule:</b> response regulator/ggdef domain protein;<br><b>PDBTitle:</b> crystal structure of full-length wpsr from pseudomonas syringae                                       |

|    |                         |  |           |              |      |    |   |
|----|-------------------------|--|-----------|--------------|------|----|---|
| 12 | <a href="#">c3ccgA</a>  |  | Alignment |              | 98.3 | 26 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> hd superfamily hydrolase;<br><b>PDBTitle:</b> crystal structure of predicted hd superfamily hydrolase involved in nad metabolism (np_347894.1) from clostridium acetobutylicum at 1.503 a resolution                      |
| 13 | <a href="#">c2ogiA</a>  |  | Alignment |              | 98.3 | 20 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> hypothetical protein sag1661;<br><b>PDBTitle:</b> crystal structure of a putative metal dependent phosphohydrolase2 (sag1661) from streptococcus agalactiae serogroup v at 1.85 a3 resolution                             |
| 14 | <a href="#">c4h54B</a>  |  | Alignment |              | 98.2 | 17 | <b>PDB header:</b> transferase<br><b>Chain:</b> B: <b>PDB Molecule:</b> diguanylate cyclase ydeh;<br><b>PDBTitle:</b> crystal structure of the diguanylate cyclase dgcz   |
| 15 | <a href="#">c4zvhB</a>  |  | Alignment |              | 98.2 | 18 | <b>PDB header:</b> signaling protein<br><b>Chain:</b> B: <b>PDB Molecule:</b> diguanylate cyclase dosc;<br><b>PDBTitle:</b> crystal structure of ggdef domain of the e. coli dosc - form iv   |
| 16 | <a href="#">c6eibC</a>  |  | Alignment |              | 98.2 | 17 | <b>PDB header:</b> transferase<br><b>Chain:</b> C: <b>PDB Molecule:</b> sensory box/ggdef family protein;<br><b>PDBTitle:</b> structure of the active ggeef domain of a diguanylate cyclase from Vibrio cholerae.   |
| 17 | <a href="#">c4zmuD</a>  |  | Alignment |              | 98.1 | 19 | <b>PDB header:</b> lyase<br><b>Chain:</b> D: <b>PDB Molecule:</b> diguanylate cyclase;<br><b>PDBTitle:</b> dcsbis, a diguanylate cyclase from pseudomonas aeruginosa  |
| 18 | <a href="#">c6d9mA</a>  |  | Alignment |              | 98.1 | 17 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> fusion protein of endolysin,response receiver sensor<br><b>PDBTitle:</b> t4-lysozyme fusion to geobacter ggdef  |
| 19 | <a href="#">c3ezuA</a>  |  | Alignment |              | 98.1 | 24 | <b>PDB header:</b> signaling protein<br><b>Chain:</b> A: <b>PDB Molecule:</b> ggdef domain protein;<br><b>PDBTitle:</b> crystal structure of multidomain protein of unknown function with ggdef-domain (np_951600.1) from geobacter sulfurreducens at 1.95 a3 resolution                        |
| 20 | <a href="#">c4iobA</a>  |  | Alignment |              | 98.1 | 14 | <b>PDB header:</b> lyase<br><b>Chain:</b> A: <b>PDB Molecule:</b> diguanylate cyclase tpbb;<br><b>PDBTitle:</b> crystal structure of the ggdef domain of pa1120 (yfin or tpbb) from Pseudomonas aeruginosa at 2.7 ang.  |
| 21 | <a href="#">c4s1cA</a>  |  | Alignment | not modelled | 98.0 | 18 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> lmo1466 protein;<br><b>PDBTitle:</b> crystal structure of l. monocytogenes phosphodiesterase pgph hd domain   |
| 22 | <a href="#">c4mcwA</a>  |  | Alignment | not modelled | 98.0 | 19 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> metal dependent phosphohydrolase;<br><b>PDBTitle:</b> metallo-enzyme from p. marina   |
| 23 | <a href="#">c3ignA</a>  |  | Alignment | not modelled | 98.0 | 16 | <b>PDB header:</b> transferase<br><b>Chain:</b> A: <b>PDB Molecule:</b> diguanylate cyclase;<br><b>PDBTitle:</b> crystal structure of the ggdef domain from Marinobacter aquaeolei2 diguanylate cyclase complexed with c-di-gmp - northeast structural genomics consortium target mqr89a        |
| 24 | <a href="#">c3i5bA</a>  |  | Alignment | not modelled | 97.9 | 18 | <b>PDB header:</b> signaling protein<br><b>Chain:</b> A: <b>PDB Molecule:</b> wspR response regulator;<br><b>PDBTitle:</b> crystal structure of the isolated ggdef domain of wspR from Pseudomonas aeruginosa   |
| 25 | <a href="#">c3icIA</a>  |  | Alignment | not modelled | 97.9 | 23 | <b>PDB header:</b> structural genomics, unknown function<br><b>Chain:</b> A: <b>PDB Molecule:</b> eal/ggdef domain protein;<br><b>PDBTitle:</b> x-ray structure of protein (eal/ggdef domain protein) from M. capsulatus, northeast structural genomics consortium target mcr174c               |
| 26 | <a href="#">c3tvkA</a>  |  | Alignment | not modelled | 97.8 | 18 | <b>PDB header:</b> transferase<br><b>Chain:</b> A: <b>PDB Molecule:</b> diguanylate cyclase dgcz;<br><b>PDBTitle:</b> diguanylate cyclase domain of dgcz  |
| 27 | <a href="#">c3i5cA</a>  |  | Alignment | not modelled | 97.8 | 19 | <b>PDB header:</b> signaling protein<br><b>Chain:</b> A: <b>PDB Molecule:</b> fusion of general control protein gcn4 and wspR response<br><b>PDBTitle:</b> crystal structure of a fusion protein containing the leucine zipper of gcn4 and the ggdef domain of wspR from Pseudomonas aeruginosa |
| 28 | <a href="#">d2pq7a1</a> |  | Alignment | not modelled | 97.8 | 29 | <b>Fold:</b> HD-domain/PDEase-like<br><b>Superfamily:</b> HD-domain/PDEase-like   |

|    |                         |           |              |      | <b>Family:</b> HD domain   |
|----|-------------------------|-----------|--------------|------|--|
| 29 | <a href="#">c5ihyB</a>  | Alignment | not modelled | 97.8 | 12<br><b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> uncharacterized protein;<br><b>PDBTitle:</b> the crystal structure of bacillus subtilis semet-ypgg   |
| 30 | <a href="#">c3mtkA</a>  | Alignment | not modelled | 97.8 | 13<br><b>PDB header:</b> transferase<br><b>Chain:</b> A: <b>PDB Molecule:</b> diguanylate cyclase/phosphodiesterase;<br><b>PDBTitle:</b> x-ray structure of diguanylate cyclase/phosphodiesterase from2 caldicellulosiruptor saccharolyticus, northeast structural genomics3 consortium target clr27c                            |
| 31 | <a href="#">c4wxoA</a>  | Alignment | not modelled | 97.8 | 13<br><b>PDB header:</b> transferase<br><b>Chain:</b> A: <b>PDB Molecule:</b> uncharacterized protein;<br><b>PDBTitle:</b> sadc (300-487) from pseudomonas aeruginosa pao1   |
| 32 | <a href="#">c5z7cA</a>  | Alignment | not modelled | 97.8 | 21<br><b>PDB header:</b> metal binding protein<br><b>Chain:</b> A: <b>PDB Molecule:</b> 3'3'-cgap-specific phosphodiesterase 3;<br><b>PDBTitle:</b> crystal structure of cyclic gmp-amp specific phosphodiesterases in2 v.cholerae (v-cgap3)   |
| 33 | <a href="#">c4r8zB</a>  | Alignment | not modelled | 97.7 | 19<br><b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> cyclic di-gmp phosphodiesterase;<br><b>PDBTitle:</b> crystal structure of pa4781 hd-gyp domain from pseudomonas aeruginosa2 at 2.2a resolution showing a bi-metallic ni ion center   |
| 34 | <a href="#">c4n71A</a>  | Alignment | not modelled | 97.7 | 24<br><b>PDB header:</b> oxidoreductase<br><b>Chain:</b> A: <b>PDB Molecule:</b> predicted hd phosphohydrolyase phnz;<br><b>PDBTitle:</b> x-ray crystal structure of 2-amino-1-hydroxyethylphosphonate-bound2 phnz   |
| 35 | <a href="#">c4zmmB</a>  | Alignment | not modelled | 97.6 | 18<br><b>PDB header:</b> transferase<br><b>Chain:</b> B: <b>PDB Molecule:</b> diguanylate cyclase;<br><b>PDBTitle:</b> ggdef domain of dcsbis complexed with c-di-gmp  |
| 36 | <a href="#">c3qyyB</a>  | Alignment | not modelled | 97.6 | 19<br><b>PDB header:</b> signaling protein/inhibitor<br><b>Chain:</b> B: <b>PDB Molecule:</b> response regulator;<br><b>PDBTitle:</b> a novel interaction mode between a microbial ggdef domain and the bis-2 (3, 5 )-cyclic di-gmp  |
| 37 | <a href="#">c4ymeA</a>  | Alignment | not modelled | 97.6 | 17<br><b>PDB header:</b> lyase<br><b>Chain:</b> A: <b>PDB Molecule:</b> sensory box/ggdef family protein;<br><b>PDBTitle:</b> crystal structure of a sensory box/ggdef family protein (cc_0091) from2 caulobacter crescentus cb15 at 1.40 a resolution (psi community3 target, shapiro)  |
| 38 | <a href="#">c3m1tA</a>  | Alignment | not modelled | 97.6 | 25<br><b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> putative phosphohydrolyase;<br><b>PDBTitle:</b> crystal structure of putative phosphohydrolyase (yp_929327.1) from2 shewanella amazonensis sb2b at 1.62 a resolution   |
| 39 | <a href="#">d1w25a3</a> | Alignment | not modelled | 97.5 | 14<br><b>Fold:</b> Ferredoxin-like<br><b>Superfamily:</b> Nucleotide cyclase<br><b>Family:</b> GGDEF domain  |
| 40 | <a href="#">c5euH</a>   | Alignment | not modelled | 97.5 | 18<br><b>PDB header:</b> membrane protein<br><b>Chain:</b> A: <b>PDB Molecule:</b> putative ggdef domain membrane protein;<br><b>PDBTitle:</b> crystal structure of the c-di-gmp-bound ggdef domain of p. fluorescens2 gcbc  |
| 41 | <a href="#">c3wfrH</a>  | Alignment | not modelled | 97.5 | 22<br><b>PDB header:</b> transferase/rna<br><b>Chain:</b> H: <b>PDB Molecule:</b> poly a polymerase;<br><b>PDBTitle:</b> trna processing enzyme complex 2  |
| 42 | <a href="#">c3hvaA</a>  | Alignment | not modelled | 97.5 | 10<br><b>PDB header:</b> transferase<br><b>Chain:</b> A: <b>PDB Molecule:</b> protein fimx;<br><b>PDBTitle:</b> crystal structure of fimx ggdef domain from pseudomonas aeruginosa   |
| 43 | <a href="#">c3wfrG</a>  | Alignment | not modelled | 97.5 | 23<br><b>PDB header:</b> transferase/rna<br><b>Chain:</b> G: <b>PDB Molecule:</b> poly a polymerase;<br><b>PDBTitle:</b> trna processing enzyme complex 2  |
| 44 | <a href="#">c4urgB</a>  | Alignment | not modelled | 97.4 | 14<br><b>PDB header:</b> lyase<br><b>Chain:</b> B: <b>PDB Molecule:</b> diguanylate cyclase;<br><b>PDBTitle:</b> crystal structure of ggdef domain from t.maritima (active-like dimer)   |
| 45 | <a href="#">c3wfpA</a>  | Alignment | not modelled | 97.4 | 22<br><b>PDB header:</b> transferase<br><b>Chain:</b> A: <b>PDB Molecule:</b> poly a polymerase;<br><b>PDBTitle:</b> trna processing enzyme (apo form 2)   |
| 46 | <a href="#">c3wfpB</a>  | Alignment | not modelled | 97.4 | 22<br><b>PDB header:</b> transferase<br><b>Chain:</b> B: <b>PDB Molecule:</b> poly a polymerase;<br><b>PDBTitle:</b> trna processing enzyme (apo form 2)   |
| 47 | <a href="#">c6npaD</a>  | Alignment | not modelled | 97.4 | 37<br><b>PDB header:</b> oxidoreductase<br><b>Chain:</b> D: <b>PDB Molecule:</b> tmpb, (r)-1-hydroxy-2-trimethylaminoethylphosphonate<br><b>PDBTitle:</b> x-ray crystal structure of tmpb, (r)-1-hydroxy-2-2 trimethylaminoethylphosphonate oxygenase, with (r)-1-hydroxy-2-3 trimethylaminoethylphosphonate                     |
| 48 | <a href="#">c3hc1A</a>  | Alignment | not modelled | 97.3 | 18<br><b>PDB header:</b> structural genomics, unknown function<br><b>Chain:</b> A: <b>PDB Molecule:</b> uncharacterized hhod domain protein;<br><b>PDBTitle:</b> crystal structure of hhod domain protein with unknown function2 (np_953345.1) from geobacter sulfurreducens at 1.90 a resolution                                |
| 49 | <a href="#">c3wfrF</a>  | Alignment | not modelled | 97.1 | 21<br><b>PDB header:</b> transferase/rna<br><b>Chain:</b> F: <b>PDB Molecule:</b> poly a polymerase;<br><b>PDBTitle:</b> trna processing enzyme complex 2  |
| 50 | <a href="#">c3gw7A</a>  | Alignment | not modelled | 97.1 | 23<br><b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> uncharacterized protein yedj;<br><b>PDBTitle:</b> crystal structure of a metal-dependent phosphohydrolyase with conserved2 hd domain (yedj) from escherichia coli in complex with nickel ions.3 northeast structural genomics consortium target er63 |
| 51 | <a href="#">d2qgsa1</a> | Alignment | not modelled | 97.1 | 14<br><b>Fold:</b> HD-domain/PDEase-like<br><b>Superfamily:</b> HD-domain/PDEase-like<br><b>Family:</b> HD domain  |
| 52 | <a href="#">c3memA</a>  | Alignment | not modelled | 97.0 | 16<br><b>PDB header:</b> signaling protein<br><b>Chain:</b> A: <b>PDB Molecule:</b> putative signal transduction protein;<br><b>PDBTitle:</b> crystal structure of a putative signal transduction protein2 (maqu_0641) from marinobacter aquaeolei vt8 at 2.25 a resolution  |

|    |                         |  |           |              |      |    |  |
|----|-------------------------|--|-----------|--------------|------|----|--|
| 53 | <a href="#">c3wfsD</a>  |  | Alignment | not modelled | 97.0 | 20 | <b>PDB header:</b> transferase/rna<br><b>Chain:</b> D: <b>PDB Molecule:</b> poly a polymerase;<br><b>PDBTitle:</b> trna processing enzyme complex 3  |
| 54 | <a href="#">c2qv6D</a>  |  | Alignment | not modelled | 97.0 | 16 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> D: <b>PDB Molecule:</b> gtp cyclohydrolase iii;<br><b>PDBTitle:</b> gtp cyclohydrolase iii from m. jannaschii (mj0145)2 complexed with gtp and metal ions  |
| 55 | <a href="#">c3wfqE</a>  |  | Alignment | not modelled | 96.9 | 20 | <b>PDB header:</b> transferase/rna<br><b>Chain:</b> E: <b>PDB Molecule:</b> poly a polymerase;<br><b>PDBTitle:</b> trna processing enzyme complex 2  |
| 56 | <a href="#">c3wfqH</a>  |  | Alignment | not modelled | 96.9 | 20 | <b>PDB header:</b> transferase/rna<br><b>Chain:</b> H: <b>PDB Molecule:</b> poly a polymerase;<br><b>PDBTitle:</b> trna processing enzyme complex 1  |
| 57 | <a href="#">c3wfqG</a>  |  | Alignment | not modelled | 96.9 | 20 | <b>PDB header:</b> transferase/rna<br><b>Chain:</b> G: <b>PDB Molecule:</b> poly a polymerase;<br><b>PDBTitle:</b> trna processing enzyme complex 1  |
| 58 | <a href="#">d1vgra</a>  |  | Alignment | not modelled | 96.9 | 13 | <b>Fold:</b> HD-domain/PDEase-like<br><b>Superfamily:</b> HD-domain/PDEase-like<br><b>Family:</b> modified HD domain   |
| 59 | <a href="#">c3wfsC</a>  |  | Alignment | not modelled | 96.8 | 22 | <b>PDB header:</b> transferase/rna<br><b>Chain:</b> C: <b>PDB Molecule:</b> poly a polymerase;<br><b>PDBTitle:</b> trna processing enzyme complex 3  |
| 60 | <a href="#">c3wfqE</a>  |  | Alignment | not modelled | 96.8 | 20 | <b>PDB header:</b> transferase/rna<br><b>Chain:</b> E: <b>PDB Molecule:</b> poly a polymerase;<br><b>PDBTitle:</b> trna processing enzyme complex 1  |
| 61 | <a href="#">c5b7iA</a>  |  | Alignment | not modelled | 96.4 | 24 | <b>PDB header:</b> hydrolase/unknown function<br><b>Chain:</b> A: <b>PDB Molecule:</b> crispr-associated nuclease/helicase cas3 subtype i-f/ypest;<br><b>PDBTitle:</b> cas3-acrf3 complex  |
| 62 | <a href="#">c3i7aA</a>  |  | Alignment | not modelled | 96.3 | 7  | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> putative metal-dependent phosphohydrolase;<br><b>PDBTitle:</b> crystal structure of putative metal-dependent phosphohydrolase2 (yp_926882.1) from shewanella amazonensis sb2b at 2.06 Å resolution                 |
| 63 | <a href="#">c3jivA</a>  |  | Alignment | not modelled | 96.3 | 14 | <b>PDB header:</b> transcription<br><b>Chain:</b> A: <b>PDB Molecule:</b> mmoq response regulator;<br><b>PDBTitle:</b> crystal structure of mmoq response regulator (fragment 29-302) from2 methylococcus capsulatus str. bath, northeast structural genomics3 consortium target mcr175m |
| 64 | <a href="#">c3wfoB</a>  |  | Alignment | not modelled | 96.2 | 25 | <b>PDB header:</b> transferase<br><b>Chain:</b> B: <b>PDB Molecule:</b> poly a polymerase;<br><b>PDBTitle:</b> trna processing enzyme (apo form 1)   |
| 65 | <a href="#">d3djb1</a>  |  | Alignment | not modelled | 96.1 | 19 | <b>Fold:</b> HD-domain/PDEase-like<br><b>Superfamily:</b> HD-domain/PDEase-like<br><b>Family:</b> HD domain  |
| 66 | <a href="#">d2pjqa1</a> |  | Alignment | not modelled | 96.0 | 16 | <b>Fold:</b> HD-domain/PDEase-like<br><b>Superfamily:</b> HD-domain/PDEase-like<br><b>Family:</b> HD domain  |
| 67 | <a href="#">c3hvwA</a>  |  | Alignment | not modelled | 95.9 | 15 | <b>PDB header:</b> lyase<br><b>Chain:</b> A: <b>PDB Molecule:</b> diguanylate-cyclase (dgc);<br><b>PDBTitle:</b> crystal structure of the ggdef domain of the pa2567 protein from2 pseudomonas aeruginosa, northeast structural genomics consortium3 target par365c                      |
| 68 | <a href="#">c3m5fA</a>  |  | Alignment | not modelled | 95.9 | 22 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> metal dependent phosphohydrolase;<br><b>PDBTitle:</b> structure of mj0384, a cas3 protein from methanocaldococcus jannaschii   |
| 69 | <a href="#">c3pjwA</a>  |  | Alignment | not modelled | 95.7 | 18 | <b>PDB header:</b> lyase<br><b>Chain:</b> A: <b>PDB Molecule:</b> cyclic dimeric gmp binding protein;<br><b>PDBTitle:</b> structure of pseudomonas fluorescence lapd ggdef-eal dual domain, i23  |
| 70 | <a href="#">c2floA</a>  |  | Alignment | not modelled | 95.6 | 10 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> exopolyphosphatase;<br><b>PDBTitle:</b> crystal structure of exopolyphosphatase (ppx) from e. coli o157:h7   |
| 71 | <a href="#">d1u6za1</a> |  | Alignment | not modelled | 95.6 | 10 | <b>Fold:</b> HD-domain/PDEase-like<br><b>Superfamily:</b> HD-domain/PDEase-like<br><b>Family:</b> Ppx associated domain  |
| 72 | <a href="#">d3b57a1</a> |  | Alignment | not modelled | 95.2 | 16 | <b>Fold:</b> HD-domain/PDEase-like<br><b>Superfamily:</b> HD-domain/PDEase-like<br><b>Family:</b> HD domain  |
| 73 | <a href="#">c5xgdA</a>  |  | Alignment | not modelled | 95.1 | 19 | <b>PDB header:</b> transcription<br><b>Chain:</b> A: <b>PDB Molecule:</b> uncharacterized protein pa0861;<br><b>PDBTitle:</b> crystal structure of the pas-ggdef-eal domain of pa0861 from2 pseudomonas aeruginosa in complex with gtp   |
| 74 | <a href="#">d3dto1</a>  |  | Alignment | not modelled | 94.9 | 14 | <b>Fold:</b> HD-domain/PDEase-like<br><b>Superfamily:</b> HD-domain/PDEase-like<br><b>Family:</b> HD domain  |
| 75 | <a href="#">c4g2dA</a>  |  | Alignment | not modelled | 93.8 | 33 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> crispr-associated helicase cas3;<br><b>PDBTitle:</b> crystal structure of crispr-associated protein in complex with 2'-deoxyadenosine 5'-triphosphate  |
| 76 | <a href="#">c4qqxA</a>  |  | Alignment | not modelled | 93.3 | 19 | <b>PDB header:</b> hydrolase/dna<br><b>Chain:</b> A: <b>PDB Molecule:</b> crispr-associated helicase, cas3 family;<br><b>PDBTitle:</b> crystal structure of t. fusca cas3-atp  |
| 77 | <a href="#">c5m3cB</a>  |  | Alignment | not modelled | 92.6 | 18 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> diguanylate cyclase;<br><b>PDBTitle:</b> structure of the hybrid domain (ggdef-eal) of pa0575 from pseudomonas2 aeruginosa pa01 at 2.8 ang. with gtp and ca2+ bound to the active3 site of the ggdef domain        |
| 78 | <a href="#">c3kldA</a>  |  | Alignment | not modelled | 92.1 | 21 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> putative uncharacterized protein ttgb187;  |

|     |                         |           |              |      |    |  |
|-----|-------------------------|-----------|--------------|------|----|--|
| 78  | <a href="#">c5krum</a>  | Alignment | not modelled | 92.1 | 21 | <b>PDBTitle:</b> crystal structure of the thermus thermophilus cas3 hd domain in the2 presence of ni2+   |
| 79  | <a href="#">d2heka1</a> | Alignment | not modelled | 91.1 | 15 | <b>Fold:</b> HD-domain/PDEase-like<br><b>Superfamily:</b> HD-domain/PDEase-like<br><b>Family:</b> HD domain  |
| 80  | <a href="#">c6brhA</a>  | Alignment | not modelled | 90.8 | 29 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> deoxynucleoside triphosphate triphosphohydrolase samhd1;<br><b>PDBTitle:</b> the sam domain of mouse samhd1 is critical for its activation and2 regulation   |
| 81  | <a href="#">c3u1nC</a>  | Alignment | not modelled | 90.2 | 29 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> C: <b>PDB Molecule:</b> sam domain and hd domain-containing protein 1;<br><b>PDBTitle:</b> structure of the catalytic core of human samhd1   |
| 82  | <a href="#">c4bzB</a>   | Alignment | not modelled | 90.0 | 18 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> deoxynucleoside triphosphate triphosphohydrolase samhd1;<br><b>PDBTitle:</b> crystal structure of the tetrameric dgtp-bound samhd12 mutant catalytic core  |
| 83  | <a href="#">c2pgsA</a>  | Alignment | not modelled | 89.9 | 22 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> putative deoxyguanosinetriphosphate triphosphohydrolase;<br><b>PDBTitle:</b> crystal structure of a putative deoxyguanosinetriphosphate2 triphosphohydrolase from pseudomonas syringae pv. phaseolicola 1448a                    |
| 84  | <a href="#">c3hi0B</a>  | Alignment | not modelled | 89.7 | 24 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> putative exopolyphosphatase;<br><b>PDBTitle:</b> crystal structure of putative exopolyphosphatase (17739545) from2 agrobacterium tumefaciens str. c58 (dupont) at 2.30 a resolution  |
| 85  | <a href="#">c2o6iA</a>  | Alignment | not modelled | 88.6 | 29 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> hd domain protein;<br><b>PDBTitle:</b> structure of an enterococcus faecalis hd domain phosphohydrolase  |
| 86  | <a href="#">d2o6ia1</a> | Alignment | not modelled | 88.6 | 29 | <b>Fold:</b> HD-domain/PDEase-like<br><b>Superfamily:</b> HD-domain/PDEase-like<br><b>Family:</b> HD domain  |
| 87  | <a href="#">c5ao4D</a>  | Alignment | not modelled | 88.1 | 31 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> D: <b>PDB Molecule:</b> deoxynucleoside triphosphate triphosphohydrolase samhd1;<br><b>PDBTitle:</b> crystal structure of in vitro phosphorylated human samhd1 (amino acid2 residues 115-626) bound to gtp   |
| 88  | <a href="#">c2q14A</a>  | Alignment | not modelled | 87.7 | 33 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> phosphohydrolase;<br><b>PDBTitle:</b> crystal structure of phosphohydrolase (bt4208) from bacteroides2 thetaiotaomicron vpi-5482 at 2.20 a resolution  |
| 89  | <a href="#">d2fqa1</a>  | Alignment | not modelled | 85.8 | 20 | <b>Fold:</b> TIM beta/alpha-barrel<br><b>Superfamily:</b> Aldolase<br><b>Family:</b> GatZ-like   |
| 90  | <a href="#">c6dk9I</a>  | Alignment | not modelled | 85.4 | 18 | <b>PDB header:</b> lyase<br><b>Chain:</b> I: <b>PDB Molecule:</b> dna damage-inducible protein;<br><b>PDBTitle:</b> yeast ddi2 cyanamide hydratase   |
| 91  | <a href="#">c2dgbB</a>  | Alignment | not modelled | 84.7 | 44 | <b>PDB header:</b> hydrolase, dna binding protein<br><b>Chain:</b> B: <b>PDB Molecule:</b> deoxyguanosinetriphosphate triphosphohydrolase, putative;<br><b>PDBTitle:</b> crystal structure of dntp triphosphohydrolase from thermus2 thermophilus hb8, which is homologous to dgtp triphosphohydrolase |
| 92  | <a href="#">c3kq5A</a>  | Alignment | not modelled | 84.7 | 21 | <b>PDB header:</b> structural genomics, unknown function<br><b>Chain:</b> A: <b>PDB Molecule:</b> hypothetical cytosolic protein;<br><b>PDBTitle:</b> crystal structure of an uncharacterized protein from coxiella burnetii   |
| 93  | <a href="#">d3bxda1</a> | Alignment | not modelled | 74.4 | 43 | <b>Fold:</b> HD-domain/PDEase-like<br><b>Superfamily:</b> HD-domain/PDEase-like<br><b>Family:</b> MioX-like  |
| 94  | <a href="#">c2huoA</a>  | Alignment | not modelled | 74.4 | 43 | <b>PDB header:</b> oxidoreductase<br><b>Chain:</b> A: <b>PDB Molecule:</b> inositol oxygenase;<br><b>PDBTitle:</b> crystal structure of mouse myo-inositol oxygenase in complex with2 substrate  |
| 95  | <a href="#">c4rnHA</a>  | Alignment | not modelled | 72.3 | 21 | <b>PDB header:</b> transferase, hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> motility regulator;<br><b>PDBTitle:</b> pamora tandem diguanylate cyclase - phosphodiesterase, c-di-gmp2 complex  |
| 96  | <a href="#">d2ibna1</a> | Alignment | not modelled | 71.4 | 43 | <b>Fold:</b> HD-domain/PDEase-like<br><b>Superfamily:</b> HD-domain/PDEase-like<br><b>Family:</b> MioX-like  |
| 97  | <a href="#">c3j20P</a>  | Alignment | not modelled | 67.7 | 24 | <b>PDB header:</b> ribosome<br><b>Chain:</b> P: <b>PDB Molecule:</b> 30s ribosomal protein s14p type z;<br><b>PDBTitle:</b> promiscuous behavior of proteins in archaeal ribosomes revealed by2 cryo-em: implications for evolution of eukaryotic ribosomes (30s3 ribosomal subunit)                   |
| 98  | <a href="#">c3bg2A</a>  | Alignment | not modelled | 64.3 | 45 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> dgtp triphosphohydrolase;<br><b>PDBTitle:</b> crystal structure of deoxyguanosinetriphosphate triphosphohydrolase2 from flavobacterium sp. med217  |
| 99  | <a href="#">c3jyvN</a>  | Alignment | not modelled | 62.5 | 33 | <b>PDB header:</b> ribosome<br><b>Chain:</b> N: <b>PDB Molecule:</b> 40s ribosomal protein s29(a);<br><b>PDBTitle:</b> structure of the 40s rrna and proteins and p/e trna for eukaryotic2 ribosome based on cryo-em map of thermomyces lanuginosus ribosome at3 8.9a resolution                       |
| 100 | <a href="#">c2xznN</a>  | Alignment | not modelled | 62.2 | 24 | <b>PDB header:</b> ribosome<br><b>Chain:</b> N: <b>PDB Molecule:</b> rps29e;<br><b>PDBTitle:</b> crystal structure of the eukaryotic 40s ribosomal2 subunit in complex with initiation factor 1. this file3 contains the 40s subunit and initiation factor for4 molecule 2                             |
| 101 | <a href="#">c2cqzA</a>  | Alignment | not modelled | 61.0 | 20 | <b>PDB header:</b> structural genomics, unknown function<br><b>Chain:</b> A: <b>PDB Molecule:</b> 177aa long hypothetical protein;<br><b>PDBTitle:</b> crystal structure of pho0347 protein from pyrococcus horikoshii ot3   |

|     |                         |  |           |              |      |    |   |
|-----|-------------------------|--|-----------|--------------|------|----|---|
| 102 | <a href="#">d1hk8a</a>  |  | Alignment | not modelled | 57.7 | 33 | <b>Fold:</b> PFL-like glycyl radical enzymes<br><b>Superfamily:</b> PFL-like glycyl radical enzymes<br><b>Family:</b> Class III anaerobic ribonucleotide reductase NRDD subunit   |
| 103 | <a href="#">c1hk8A</a>  |  | Alignment | not modelled | 57.7 | 33 | <b>PDB header:</b> oxidoreductase<br><b>Chain:</b> A: <b>PDB Molecule:</b> anaerobic ribonucleotide-triphosphate reductase;<br><b>PDBTitle:</b> structural basis for allosteric substrate specificity regulation in2 class iii ribonucleotide reductases: nrdd in complex with dgtp |
| 104 | <a href="#">c2hr5B</a>  |  | Alignment | not modelled | 54.4 | 17 | <b>PDB header:</b> metal binding protein<br><b>Chain:</b> B: <b>PDB Molecule:</b> rubrerythrin;<br><b>PDBTitle:</b> pf1283- rubrerythrin from pyrococcus furiosus iron bound form   |
| 105 | <a href="#">c3zey8</a>  |  | Alignment | not modelled | 53.7 | 24 | <b>PDB header:</b> ribosome<br><b>Chain:</b> 8: <b>PDB Molecule:</b> ribosomal protein s29, putative;<br><b>PDBTitle:</b> high-resolution cryo-electron microscopy structure of the trypanosoma2 brucei ribosome  |
| 106 | <a href="#">c2zkqn</a>  |  | Alignment | not modelled | 53.5 | 22 | <b>PDB header:</b> ribosomal protein/rna<br><b>Chain:</b> N: <b>PDB Molecule:</b><br><b>PDBTitle:</b> structure of a mammalian ribosomal 40s subunit within an 80s complex2 obtained by docking homology models of the rna and proteins into an3 8.7 a cryo-em map                  |
| 107 | <a href="#">c5xxud</a>  |  | Alignment | not modelled | 51.8 | 27 | <b>PDB header:</b> ribosome<br><b>Chain:</b> D: <b>PDB Molecule:</b> ribosomal protein us3;<br><b>PDBTitle:</b> small subunit of toxoplasma gondii ribosome   |
| 108 | <a href="#">c1dvba</a>  |  | Alignment | not modelled | 50.7 | 13 | <b>PDB header:</b> electron transport<br><b>Chain:</b> A: <b>PDB Molecule:</b> rubrerythrin;<br><b>PDBTitle:</b> rubrerythrin   |
| 109 | <a href="#">c1z1IA</a>  |  | Alignment | not modelled | 50.7 | 27 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> cgmp-dependent 3',5'-cyclic phosphodiesterase;<br><b>PDBTitle:</b> the crystal structure of the phosphodiesterase 2a catalytic2 domain  |
| 110 | <a href="#">c5xyid</a>  |  | Alignment | not modelled | 49.9 | 18 | <b>PDB header:</b> ribosome<br><b>Chain:</b> D: <b>PDB Molecule:</b> ribosomal protein s3, putative;<br><b>PDBTitle:</b> small subunit of trichomonas vaginalis ribosome  |
| 111 | <a href="#">d3dy8a1</a> |  | Alignment | not modelled | 49.2 | 13 | <b>Fold:</b> HD-domain/PDEase-like<br><b>Superfamily:</b> HD-domain/PDEase-like<br><b>Family:</b> PDEase  |
| 112 | <a href="#">c1xotB</a>  |  | Alignment | not modelled | 49.0 | 27 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> camp-specific 3',5'-cyclic phosphodiesterase 4b;<br><b>PDBTitle:</b> catalytic domain of human phosphodiesterase 4b in complex with2 vardenafil   |
| 113 | <a href="#">c3qj4A</a>  |  | Alignment | not modelled | 48.9 | 13 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> high affinity cgmp-specific 3',5'-cyclic phosphodiesterase<br><b>PDBTitle:</b> crystal structure of pde9a(q453e) in complex with ibmx   |
| 114 | <a href="#">d1taza</a>  |  | Alignment | not modelled | 48.9 | 27 | <b>Fold:</b> HD-domain/PDEase-like<br><b>Superfamily:</b> HD-domain/PDEase-like<br><b>Family:</b> PDEase  |
| 115 | <a href="#">c2ounA</a>  |  | Alignment | not modelled | 48.8 | 33 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> camp and camp-inhibited cgmp 3',5'-cyclic<br><b>PDBTitle:</b> crystal structure of pde10a2 in complex with amp  |
| 116 | <a href="#">d1so2a</a>  |  | Alignment | not modelled | 48.1 | 20 | <b>Fold:</b> HD-domain/PDEase-like<br><b>Superfamily:</b> HD-domain/PDEase-like<br><b>Family:</b> PDEase  |
| 117 | <a href="#">d1y2ka1</a> |  | Alignment | not modelled | 48.1 | 27 | <b>Fold:</b> HD-domain/PDEase-like<br><b>Superfamily:</b> HD-domain/PDEase-like<br><b>Family:</b> PDEase  |
| 118 | <a href="#">c6az1S</a>  |  | Alignment | not modelled | 48.0 | 23 | <b>PDB header:</b> ribosome/antibiotic<br><b>Chain:</b> S: <b>PDB Molecule:</b> ribosomal protein s14;<br><b>PDBTitle:</b> cryo-em structure of the small subunit of leishmania ribosome bound to2 paromomycin  |
| 119 | <a href="#">c2r8qA</a>  |  | Alignment | not modelled | 47.9 | 20 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> class i phosphodiesterase pdeb1;<br><b>PDBTitle:</b> structure of lmpdeb1 in complex with ibmx  |
| 120 | <a href="#">c1xoza</a>  |  | Alignment | not modelled | 47.5 | 27 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> cgmp-specific 3',5'-cyclic phosphodiesterase;<br><b>PDBTitle:</b> catalytic domain of human phosphodiesterase 5a in complex2 with tadalafil   |