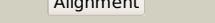
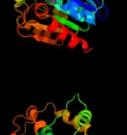
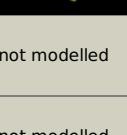


# Phyre<sup>2</sup>

|               |                               |
|---------------|-------------------------------|
| Email         | mdejesus@rockefeller.edu      |
| Description   | RVBD0554_(bpoC)_645470_646258 |
| Date          | Fri Jul 26 01:50:10 BST 2019  |
| Unique Job ID | e1663c9801b58160              |

Detailed template information

| #  | Template                | Alignment Coverage  | 3D Model  | Confidence | % i.d. | Template Information  |
|----|-------------------------|---|---|------------|--------|---|
| 1  | <a href="#">c3i28A</a>  |    |    | 100.0      | 18     | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> epoxide hydrolase 2;<br><b>PDBTitle:</b> crystal structure of soluble epoxide hydrolase   |
| 2  | <a href="#">c3e3aA</a>  |    |    | 100.0      | 100    | <b>PDB header:</b> oxidoreductase<br><b>Chain:</b> A: <b>PDB Molecule:</b> possible peroxidase bpc;<br><b>PDBTitle:</b> the structure of rv0554 from mycobacterium tuberculosis   |
| 3  | <a href="#">c1cr6A</a>  |    |    | 100.0      | 19     | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> epoxide hydrolase;<br><b>PDBTitle:</b> crystal structure of murine soluble epoxide hydrolase2 complexed with cpo inhibitor  |
| 4  | <a href="#">c4d9jl</a>  |    |    | 100.0      | 25     | <b>PDB header:</b> de novo protein<br><b>Chain:</b> I: <b>PDB Molecule:</b> designed 16nm tetrahedral protein cage containing non-haem<br><b>PDBTitle:</b> structure of a 16 nm protein cage designed by fusing symmetric2 oligomeric domains |
| 5  | <a href="#">c4y7dA</a>  |  |  | 100.0      | 19     | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> alpha/beta hydrolase fold protein;<br><b>PDBTitle:</b> alpha/beta hydrolase fold protein from nakamurella multipartita  |
| 6  | <a href="#">c4uhhA</a>  |  |  | 100.0      | 21     | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> esterase;<br><b>PDBTitle:</b> structural studies of a thermophilic esterase from2 thermogutta terrifontis (cacodylate complex)  |
| 7  | <a href="#">c5h3hb</a>  |  |  | 100.0      | 19     | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> abhydrolase domain-containing protein;<br><b>PDBTitle:</b> esterase (eaest) from exiguobacterium antarcticum  |
| 8  | <a href="#">d2rhwa1</a> |  |  | 100.0      | 19     | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Carbon-carbon bond hydrolase  |
| 9  | <a href="#">c3wibB</a>  |  |  | 100.0      | 13     | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> haloalkane dehalogenase;<br><b>PDBTitle:</b> crystal structure of y109w mutant haloalkane dehalogenase data from2 agrobacterium tumefaciens c58                         |
| 10 | <a href="#">c3kxpD</a>  |  |  | 100.0      | 20     | <b>PDB header:</b> hydrolase<br><b>Chain:</b> D: <b>PDB Molecule:</b> alpha-(n-acetylaminomethylene)succinic acid hydrolase;<br><b>PDBTitle:</b> crystal structure of e-2-(acetamidomethylene)succinate hydrolase                             |
| 11 | <a href="#">c4pw0A</a>  |  |  | 100.0      | 19     | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> alpha/beta hydrolase fold protein;<br><b>PDBTitle:</b> alpha/beta hydrolase fold protein from chitinophaga pinensis   |

|    |                         |           |   |       |    |  |
|----|-------------------------|-----------|---|-------|----|--|
| 12 | <a href="#">c3oosA</a>  | Alignment |     | 100.0 | 13 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> alpha/beta hydrolase family protein;<br><b>PDBTitle:</b> the structure of an alpha/beta fold family hydrolase from bacillus2 anthracis str. sterne |
| 13 | <a href="#">c4q3IC</a>  | Alignment |    | 100.0 | 21 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> C: <b>PDB Molecule:</b> mgs-m2;<br><b>PDBTitle:</b> crystal structure of mgs-m2, an alpha/beta hydrolase enzyme from a2 medee basin deep-sea metagenome library            |
| 14 | <a href="#">d1m33a</a>  | Alignment |    | 100.0 | 16 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Biotin biosynthesis protein BioH   |
| 15 | <a href="#">d1zd3a2</a> | Alignment |    | 100.0 | 19 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Epoxide hydrolase  |
| 16 | <a href="#">d1q0ra</a>  | Alignment |    | 100.0 | 19 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Aclacinomycin methylesterase RdmC  |
| 17 | <a href="#">c4psuA</a>  | Alignment |   | 100.0 | 19 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> alpha/beta hydrolase;<br><b>PDBTitle:</b> crystal structure of alpha/beta hydrolase from rhopseudomonas2 palustris cga009                          |
| 18 | <a href="#">d1cr6a2</a> | Alignment |  | 100.0 | 19 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Epoxide hydrolase  |
| 19 | <a href="#">c3kdaB</a>  | Alignment |  | 100.0 | 15 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> cftr inhibitory factor (cif);<br><b>PDBTitle:</b> crystal structure of the cftr inhibitory factor cif with the h269a2 mutation                     |
| 20 | <a href="#">c4lxgA</a>  | Alignment |  | 100.0 | 17 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> mcp hydrolase;<br><b>PDBTitle:</b> crystal structure of dxnb2, a carbon - carbon bond hydrolase from2 sphingomonas wittichii rw1                   |
| 21 | <a href="#">c3u1tA</a>  | Alignment | not modelled  | 100.0 | 18 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> dmma haloalkane dehalogenase;<br><b>PDBTitle:</b> haloalkane dehalogenase, dmma, of marine microbial origin  |
| 22 | <a href="#">c5egnB</a>  | Alignment | not modelled  | 100.0 | 22 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> esterase;<br><b>PDBTitle:</b> est816 as an n-acyl homoserine lactone degrading enzyme  |
| 23 | <a href="#">c3fsgC</a>  | Alignment | not modelled  | 100.0 | 16 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> C: <b>PDB Molecule:</b> alpha/beta superfamily hydrolase;<br><b>PDBTitle:</b> crystal structure of alpha/beta superfamily hydrolase from oenococcus2 oeni psu-1            |
| 24 | <a href="#">c1u2eA</a>  | Alignment | not modelled  | 100.0 | 20 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> 2-hydroxy-6-ketonona-2,4-dienedioic acid<br><b>PDBTitle:</b> crystal structure of the c-c bond hydrolase mhpc                                      |
| 25 | <a href="#">c3fobA</a>  | Alignment | not modelled  | 100.0 | 21 | <b>PDB header:</b> oxidoreductase<br><b>Chain:</b> A: <b>PDB Molecule:</b> bromoperoxidase;<br><b>PDBTitle:</b> crystal structure of bromoperoxidase from bacillus anthracis   |
| 26 | <a href="#">c4rnxB</a>  | Alignment | not modelled  | 100.0 | 19 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> esterase;<br><b>PDBTitle:</b> crystal structure of an esterase rhest1 from rhodococcus sp. ecu1013   |
| 27 | <a href="#">d1hkha</a>  | Alignment | not modelled  | 100.0 | 20 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Haloperoxidase   |
| 28 | <a href="#">d1b6ga</a>  | Alignment | not modelled  | 100.0 | 17 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Halokane dehalogenase  |
|    |                         |           |   |       |    | <b>Fold:</b> alpha/beta-Hydrolases   |

|    |                          |           |              |       |    |   |
|----|--------------------------|-----------|--------------|-------|----|---|
| 29 | <a href="#">d1brta_</a>  | Alignment | not modelled | 100.0 | 21 | <b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Haloperoxidase  |
| 30 | <a href="#">c5w15D_</a>  | Alignment | not modelled | 100.0 | 20 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> D: <b>PDB Molecule:</b> alpha/beta hydrolase fold protein;<br><b>PDBTitle:</b> crystal structure of an alpha/beta hydrolase fold protein from2 burkholderia ambifaria.  |
| 31 | <a href="#">d1ehya_</a>  | Alignment | not modelled | 100.0 | 18 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Epoxide hydrolase   |
| 32 | <a href="#">c5a62A_</a>  | Alignment | not modelled | 100.0 | 16 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> putative alpha/beta hydrolase fold protein;<br><b>PDBTitle:</b> hydrolytic potential of the ammonia-oxidizing thaumarchaeon2 nitrososphaera gargensis - crystal structure and activity profiles of 3 carboxylesterases linked to their metabolic function |
| 33 | <a href="#">c4gloA_</a>  | Alignment | not modelled | 100.0 | 20 | <b>PDB header:</b> transferase<br><b>Chain:</b> A: <b>PDB Molecule:</b> homoserine o-acetyltransferase;<br><b>PDBTitle:</b> crystal structure of homoserine o-acetyltransferase from2 staphylococcus aureus   |
| 34 | <a href="#">c2cpA_</a>   | Alignment | not modelled | 100.0 | 18 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> epoxide hydrolase;<br><b>PDBTitle:</b> structure of potato (solanum tuberosum) epoxide hydrolase i (steh1)  |
| 35 | <a href="#">d1a8qa_</a>  | Alignment | not modelled | 100.0 | 25 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Haloperoxidase  |
| 36 | <a href="#">c5xmdA_</a>  | Alignment | not modelled | 100.0 | 21 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> epoxide hydrolase a;<br><b>PDBTitle:</b> crystal structure of epoxide hydrolase vreh1 from vigna radiata  |
| 37 | <a href="#">c3a2nF_</a>  | Alignment | not modelled | 100.0 | 15 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> F: <b>PDB Molecule:</b> haloalkane dehalogenase;<br><b>PDBTitle:</b> crystal structure of dbja (wild type type ii p21)  |
| 38 | <a href="#">c4f0jA_</a>  | Alignment | not modelled | 100.0 | 20 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> probable hydrolytic enzyme;<br><b>PDBTitle:</b> crystal structure of a probable hydrolytic enzyme (pa3053) from2 pseudomonas aeruginosa pao1 at 1.50 a resolution   |
| 39 | <a href="#">c4l0cA_</a>  | Alignment | not modelled | 100.0 | 17 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> deformylase;<br><b>PDBTitle:</b> crystal structure of the n-formylmaleamic acid deformylase nfo(s94a)2 from pseudomonas putida s16  |
| 40 | <a href="#">d1a8sa_</a>  | Alignment | not modelled | 100.0 | 16 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Haloperoxidase  |
| 41 | <a href="#">c5esrA_</a>  | Alignment | not modelled | 100.0 | 15 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> haloalkane dehalogenase;<br><b>PDBTitle:</b> crystal structure of haloalkane dehalogenase (dcca) from caulobacter2 crescentus   |
| 42 | <a href="#">c4rpcA_</a>  | Alignment | not modelled | 100.0 | 14 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> putative alpha/beta hydrolase;<br><b>PDBTitle:</b> crystal structure of the putative alpha/beta hydrolase family protein2 from desulfitobacterium hafniense   |
| 43 | <a href="#">c2e3jA_</a>  | Alignment | not modelled | 100.0 | 20 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> epoxide hydrolase ephb;<br><b>PDBTitle:</b> the crystal structure of epoxide hydrolase b (rv1938) from2 mycobacterium tuberculosis at 2.1 angstrom  |
| 44 | <a href="#">d1va4a_</a>  | Alignment | not modelled | 100.0 | 18 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Haloperoxidase  |
| 45 | <a href="#">c4inzB_</a>  | Alignment | not modelled | 100.0 | 17 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> soluble epoxide hydrolase;<br><b>PDBTitle:</b> the crystal structure of m145a mutant of an epoxide hydrolase from2 bacillus megaterium  |
| 46 | <a href="#">c3v48B_</a>  | Alignment | not modelled | 100.0 | 20 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> putative aminoacrylate hydrolase rutd;<br><b>PDBTitle:</b> crystal structure of the putative alpha/beta hydrolase rutd from2 e.coli   |
| 47 | <a href="#">c1wprA_</a>  | Alignment | not modelled | 100.0 | 16 | <b>PDB header:</b> signaling protein<br><b>Chain:</b> A: <b>PDB Molecule:</b> sigma factor sigb regulation protein rsbq;<br><b>PDBTitle:</b> crystal structure of rsbq inhibited by pmfsf   |
| 48 | <a href="#">c4opmB_</a>  | Alignment | not modelled | 100.0 | 18 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> lipase;<br><b>PDBTitle:</b> crystal structure of a putative lipase (lip1) from acinetobacter2 baumannii aye at 1.70 a resolution  |
| 49 | <a href="#">d2b61a1</a>  | Alignment | not modelled | 100.0 | 19 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> O-acetyltransferase   |
| 50 | <a href="#">c2avavL_</a> | Alignment | not modelled | 100.0 | 17 | <b>PDB header:</b> transferase<br><b>Chain:</b> L: <b>PDB Molecule:</b> acetyl-coa--deacetylcephalosporin c acetyltransferase;<br><b>PDBTitle:</b> crystal structure of deacetylcephalosporin c acetyltransferase (dac-2 soak)  |
| 51 | <a href="#">c3om8A_</a>  | Alignment | not modelled | 100.0 | 24 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> probable hydrolase;<br><b>PDBTitle:</b> the crystal structure of a hydrolase from pseudomonas aeruginosa pa01   |
| 52 | <a href="#">c4nvrC_</a>  | Alignment | not modelled | 100.0 | 15 | <b>PDB header:</b> transferase<br><b>Chain:</b> C: <b>PDB Molecule:</b> putative acyltransferase;<br><b>PDBTitle:</b> 2.22 angstrom resolution crystal structure of a putative2 acyltransferase from salmonella enterica  |
| 53 | <a href="#">c5d6oB_</a>  | Alignment | not modelled | 100.0 | 19 | <b>PDB header:</b> transferase<br><b>Chain:</b> B: <b>PDB Molecule:</b> homoserine o-acetyltransferase;<br><b>PDBTitle:</b> orthorhombic crystal structure of an acetylester hydrolase from2 corynebacterium glutamicum   |
| 54 | <a href="#">c4oseA_</a>  | Alignment | not modelled | 100.0 | 15 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> putative hydrolase;<br><b>PDBTitle:</b> x-ray crystal structure of a putative hydrolase from rickettsia typhi   |

|    |                         |           |              |       |    |   |
|----|-------------------------|-----------|--------------|-------|----|---|
| 55 | <a href="#">d1c4xa</a>  | Alignment | not modelled | 100.0 | 19 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Carbon-carbon bond hydrolase  |
| 56 | <a href="#">c5mxpB</a>  | Alignment | not modelled | 100.0 | 16 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> alpha/beta hydrolase;<br><b>PDBTitle:</b> haloalkane dehalogenase dmxa from marinobacter sp. elb17 possessing a2 unique catalytic residue   |
| 57 | <a href="#">d1uk8a</a>  | Alignment | not modelled | 100.0 | 14 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Carbon-carbon bond hydrolase  |
| 58 | <a href="#">c2xt0A</a>  | Alignment | not modelled | 100.0 | 15 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> haloalkane dehalogenase;<br><b>PDBTitle:</b> dehalogenase dppa from plesiocystis pacifica sir-i   |
| 59 | <a href="#">c2vf2A</a>  | Alignment | not modelled | 100.0 | 19 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> 2-hydroxy-6-oxo-6-phenylhexa-2,4-dienoate<br><b>PDBTitle:</b> x-ray crystal structure of hsad from mycobacterium2 tuberculosis  |
| 60 | <a href="#">c6brtB</a>  | Alignment | not modelled | 100.0 | 18 | <b>PDB header:</b> ligase<br><b>Chain:</b> B: <b>PDB Molecule:</b> d3-cth-d14-d-ring;<br><b>PDBTitle:</b> f-box protein cth with hydrolase  |
| 61 | <a href="#">c3bf7B</a>  | Alignment | not modelled | 100.0 | 18 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> esterase ybff;<br><b>PDBTitle:</b> 1.1 resolution structure of ybff, a new esterase from escherichia coli: a unique substrate-binding crevice generated by domain3 arrangement  |
| 62 | <a href="#">c2wj4B</a>  | Alignment | not modelled | 100.0 | 13 | <b>PDB header:</b> oxidoreductase<br><b>Chain:</b> B: <b>PDB Molecule:</b> 1-h-3-hydroxy-4-oxoquinaldine 2,4-dioxygenase;<br><b>PDBTitle:</b> crystal structure of the cofactor-devoid 1-h-3-hydroxy-4-oxoquinaldine 2,4-dioxygenase (hod) from arthrobacter3 nitroguajacolicus ru61a anaerobically complexed with its4 natural substrate 1-h-3-hydroxy-4-oxoquinaldine |
| 63 | <a href="#">c3i1iA</a>  | Alignment | not modelled | 100.0 | 18 | <b>PDB header:</b> transferase<br><b>Chain:</b> A: <b>PDB Molecule:</b> homoserine o-acetyltransferase;<br><b>PDBTitle:</b> x-ray crystal structure of homoserine o-acetyltransferase from bacillus anthracis   |
| 64 | <a href="#">c2r11D</a>  | Alignment | not modelled | 100.0 | 19 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> D: <b>PDB Molecule:</b> carboxylesterase np;<br><b>PDBTitle:</b> crystal structure of putative hydrolase (2632844) from bacillus2 subtilis at 1.96 a resolution   |
| 65 | <a href="#">c1y37A</a>  | Alignment | not modelled | 100.0 | 16 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> fluoroacetate dehalogenase;<br><b>PDBTitle:</b> structure of fluoroacetate dehalogenase from burkholderia sp. fa1   |
| 66 | <a href="#">d1bn7a</a>  | Alignment | not modelled | 100.0 | 16 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Haloalkane dehalogenase   |
| 67 | <a href="#">c2y6vB</a>  | Alignment | not modelled | 100.0 | 20 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> peroxisomal membrane protein lpx1;<br><b>PDBTitle:</b> peroxisomal alpha-beta-hydrolase lpx1 (yor084w) from saccharomyces2 cerevisiae (crystal form i)  |
| 68 | <a href="#">c5ng7B</a>  | Alignment | not modelled | 100.0 | 20 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> epoxide hydrolase;<br><b>PDBTitle:</b> novel epoxide hydrolases belonging to the alpha/beta hydrolases2 superfamily in metagenomes from hot environments  |
| 69 | <a href="#">c4i3fA</a>  | Alignment | not modelled | 100.0 | 18 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> serine hydrolase ccsp0084;<br><b>PDBTitle:</b> crystal structure of serine hydrolase ccsp0084 from the polyaromatic2 hydrocarbon (pah)-degrading bacterium cycloclasticus zankles   |
| 70 | <a href="#">c3qyjB</a>  | Alignment | not modelled | 100.0 | 18 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> alr0039 protein;<br><b>PDBTitle:</b> crystal structure of alr0039, a putative alpha/beta hydrolase from2 nostoc sp pcc 7120.  |
| 71 | <a href="#">c1zoiC</a>  | Alignment | not modelled | 100.0 | 21 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> C: <b>PDB Molecule:</b> esterase;<br><b>PDBTitle:</b> crystal structure of a stereoselective esterase from2 pseudomonas putida ifo12996   |
| 72 | <a href="#">c3qvmA</a>  | Alignment | not modelled | 100.0 | 13 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> olei00960;<br><b>PDBTitle:</b> the structure of olei00960, a hydrolase from oleispira antarctica  |
| 73 | <a href="#">c5efzC</a>  | Alignment | not modelled | 100.0 | 18 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> C: <b>PDB Molecule:</b> homoserine o-acetyltransferase;<br><b>PDBTitle:</b> monoclinic structure of the acetyl esterase mekb  |
| 74 | <a href="#">c5z89A</a>  | Alignment | not modelled | 100.0 | 14 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> hyposensitive to light 7;<br><b>PDBTitle:</b> structural basis for specific inhibition of highly sensitive shhtl72 receptor   |
| 75 | <a href="#">c5cbkA</a>  | Alignment | not modelled | 100.0 | 16 | <b>PDB header:</b> signaling protein<br><b>Chain:</b> A: <b>PDB Molecule:</b> shhtl5;<br><b>PDBTitle:</b> crystal structure of the strigolactone receptor shhtl5 from striga2 hermonthica   |
| 76 | <a href="#">c5cw2C</a>  | Alignment | not modelled | 100.0 | 22 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> C: <b>PDB Molecule:</b> putative epoxide hydrolase epha;<br><b>PDBTitle:</b> crystal structure of epoxide hydrolase a from mycobacterium2 thermoresistibile   |
| 77 | <a href="#">c2xuaH</a>  | Alignment | not modelled | 100.0 | 23 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> H: <b>PDB Molecule:</b> 3-oxoadipate enol-lactonase;<br><b>PDBTitle:</b> crystal structure of the enol-lactonase from burkholderia2 xenovorans lb400  |
| 78 | <a href="#">c6f9oA</a>  | Alignment | not modelled | 100.0 | 15 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> haloalkane dehalogenase;<br><b>PDBTitle:</b> crystal structure of cold-adapted haloalkane dehalogenase dcpa from2 psychrobacter cryohalolentis k5   |
| 79 | <a href="#">d2vata1</a> | Alianment | not modelled | 100.0 | 18 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases   |

|     |                        |           |              |       | <b>Family:</b> O-acetyltransferase  |
|-----|------------------------|-----------|--------------|-------|---|
| 80  | <a href="#">c4c6hA</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> haloalkane dehalogenase;<br><b>PDBTitle:</b> haloalkane dehalogenase with 1-hexanol   |
| 81  | <a href="#">c2qmqA</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> signaling protein<br><b>Chain:</b> A: <b>PDB Molecule:</b> protein ndrg2;<br><b>PDBTitle:</b> crystal structure of a n-myc downstream regulated 2 protein (ndrg2,2, syld, ndr2, ai182517, au040374) from mus musculus at 1.70 Å resolution         |
| 82  | <a href="#">c2xmzA</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> lyase<br><b>Chain:</b> A: <b>PDB Molecule:</b> hydrolase, alpha/beta hydrolase fold family;<br><b>PDBTitle:</b> structure of menh from s. aureus   |
| 83  | <a href="#">c4b9aA</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> probable epoxide hydrolase;<br><b>PDBTitle:</b> structure of a putative epoxide hydrolase from pseudomonas2 aeruginosa.   |
| 84  | <a href="#">c5nfqA</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> epoxide hydrolase belonging to alpha/beta hydrolase<br><b>PDBTitle:</b> novel epoxide hydrolases belonging to the alpha/beta hydrolases2 superfamily in metagenomes from hot environments       |
| 85  | <a href="#">c4dnqA</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> dad2;<br><b>PDBTitle:</b> crystal structure of dad2 s96a mutant   |
| 86  | <a href="#">d1mj5a</a> | Alignment | not modelled | 100.0 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Halooalkane dehalogenase  |
| 87  | <a href="#">c4ccyA</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> carboxylesterase ybfk;<br><b>PDBTitle:</b> crystal structure of carboxylesterase cesb (ybfk) from bacillus2 subtilis  |
| 88  | <a href="#">c3ibtA</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> oxidoreductase<br><b>Chain:</b> A: <b>PDB Molecule:</b> 1h-3-hydroxy-4-oxoquinoline 2,4-dioxygenase;<br><b>PDBTitle:</b> structure of 1h-3-hydroxy-4-oxoquinoline 2,4-dioxygenase (qdo)  |
| 89  | <a href="#">d1j1ia</a> | Alignment | not modelled | 100.0 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Carbon-carbon bond hydrolase  |
| 90  | <a href="#">c1j1iA</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> meta cleavage compound hydrolase;<br><b>PDBTitle:</b> crystal structure of a his-tagged serine hydrolase involved2 in the carbazole degradation (carc enzyme)                                   |
| 91  | <a href="#">c5frdA</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> carboxylesterase (est-2);<br><b>PDBTitle:</b> structure of a thermophilic esterase  |
| 92  | <a href="#">c2yy5A</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> structural genomics, unknown function<br><b>Chain:</b> A: <b>PDB Molecule:</b> proline iminopeptidase-related protein;<br><b>PDBTitle:</b> crystal structure of the proline iminopeptidase-related protein2 ttha1809 from thermus thermophilus hb8 |
| 93  | <a href="#">d1a88a</a> | Alignment | not modelled | 100.0 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Haloperoxidase  |
| 94  | <a href="#">c2qvB</a>  | Alignment | not modelled | 100.0 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> haloalkane dehalogenase 3;<br><b>PDBTitle:</b> crystal structure of haloalkane dehalogenase rv2579 from mycobacterium2 tuberculosis   |
| 95  | <a href="#">c5jkjA</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> esterase e22;<br><b>PDBTitle:</b> crystal structure of esterase e22 l374d mutant  |
| 96  | <a href="#">c5dnvA</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> shkai2ib;<br><b>PDBTitle:</b> crystal structure of kai2-like protein from striga (apo state 2)  |
| 97  | <a href="#">c5w8pA</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> transferase<br><b>Chain:</b> A: <b>PDB Molecule:</b> homoserine o-acetyltransferase;<br><b>PDBTitle:</b> homoserine transacetylase meta from mycobacterium abscessus   |
| 98  | <a href="#">c3r0vA</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A: <b>PDB Molecule:</b> alpha/beta hydrolase fold protein;<br><b>PDBTitle:</b> the crystal structure of an alpha/beta hydrolase from sphaerobacter2 thermophilus dsm 20745.   |
| 99  | <a href="#">c4mj3B</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> haloalkane dehalogenase;<br><b>PDBTitle:</b> haloalkane dehalogenase dmra from mycobacterium rhodesiae j560   |
| 100 | <a href="#">c3vvIA</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> transferase<br><b>Chain:</b> A: <b>PDB Molecule:</b> homoserine o-acetyltransferase;<br><b>PDBTitle:</b> crystal structure of l-serine-o-acetyltransferase found in d-2 cycloserine biosynthetic pathway   |
| 101 | <a href="#">c4x00D</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> D: <b>PDB Molecule:</b> putative hydrolase;<br><b>PDBTitle:</b> x-ray crystal structure of a putative aryl esterase from burkholderia2 cenocepacia  |
| 102 | <a href="#">d1azwa</a> | Alignment | not modelled | 100.0 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Proline iminopeptidase-like   |
| 103 | <a href="#">c2pseA</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> oxidoreductase<br><b>Chain:</b> A: <b>PDB Molecule:</b> renilla-luciferin 2-monooxygenase;<br><b>PDBTitle:</b> crystal structures of the luciferase and green fluorescent2 protein from renilla reniformis   |
| 104 | <a href="#">c5yhpB</a> | Alignment | not modelled | 100.0 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B: <b>PDB Molecule:</b> cold active proline iminopeptidase;<br><b>PDBTitle:</b> proline iminopeptidase from psychrophilic yeast glaciocysta antarctica  |
|     |                        |           |              |       | <b>PDB header:</b> hydrolase  |

|     |                        |           |              |       |    |   |
|-----|------------------------|-----------|--------------|-------|----|---|
| 105 | <a href="#">c4ns4A</a> | Alignment | not modelled | 100.0 | 16 | <b>Chain:</b> A; <b>PDB Molecule:</b> alpha/beta hydrolase fold protein;<br><b>PDBTitle:</b> crystal structure of cold-active esterase from psychrobacter2 cryohalolentis k5t   |
| 106 | <a href="#">d1mtza</a> | Alignment | not modelled | 100.0 | 14 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Proline iminopeptidase-like   |
| 107 | <a href="#">c3w06A</a> | Alignment | not modelled | 100.0 | 19 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A; <b>PDB Molecule:</b> hydrolase, alpha/beta fold family protein;<br><b>PDBTitle:</b> crystal structure of arabidopsis thaliana dwarf14 like (atd14)   |
| 108 | <a href="#">c3r3xA</a> | Alignment | not modelled | 100.0 | 19 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A; <b>PDB Molecule:</b> fluoroacetate dehalogenase;<br><b>PDBTitle:</b> crystal structure of the fluoroacetate dehalogenase rpa1163 -2 asp110asn/bromoacetate   |
| 109 | <a href="#">c3p2mA</a> | Alignment | not modelled | 100.0 | 17 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A; <b>PDB Molecule:</b> possible hydrolase;<br><b>PDBTitle:</b> crystal structure of a novel esterase rv0045c from mycobacterium2 tuberculosis  |
| 110 | <a href="#">c4glaA</a> | Alignment | not modelled | 100.0 | 16 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A; <b>PDB Molecule:</b> juvenile hormone epoxide hydrolase;<br><b>PDBTitle:</b> crystal structure of juvenile hormone epoxide hydrolase from the2 silkworm bombyx mori  |
| 111 | <a href="#">c3bwxA</a> | Alignment | not modelled | 100.0 | 15 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A; <b>PDB Molecule:</b> alpha/beta hydrolase;<br><b>PDBTitle:</b> crystal structure of an alpha/beta hydrolase (yp_496220.1) from2 novosphingobium aromaticivorans dsm 12444 at 1.50 a resolution                           |
| 112 | <a href="#">d1xkla</a> | Alignment | not modelled | 100.0 | 14 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Hydroxynitrile lyase-like   |
| 113 | <a href="#">c5uroA</a> | Alignment | not modelled | 100.0 | 16 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A; <b>PDB Molecule:</b> predicted protein;<br><b>PDBTitle:</b> structure of a soluble epoxide hydrolase identified in trichoderma2 reesei   |
| 114 | <a href="#">c5jd6A</a> | Alignment | not modelled | 100.0 | 20 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A; <b>PDB Molecule:</b> mgs-mche2;<br><b>PDBTitle:</b> crystal structure of mgs-mche2, an alpha/beta hydrolase enzyme from2 the metagenome of sediments from the lagoon of mar chica, morocco                               |
| 115 | <a href="#">c4glaB</a> | Alignment | not modelled | 100.0 | 14 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> B; <b>PDB Molecule:</b> juvenile hormone epoxide hydrolase;<br><b>PDBTitle:</b> crystal structure of juvenile hormone epoxide hydrolase from the2 silkworm bombyx mori  |
| 116 | <a href="#">c5bovD</a> | Alignment | not modelled | 100.0 | 20 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> D; <b>PDB Molecule:</b> putative epoxide hydrolase protein;<br><b>PDBTitle:</b> crystal structure of a putative epoxide hydrolase (kpn_01808) from2 klebsiella pneumoniae subsp. pneumoniae mgh 78578 at 1.60 a3 resolution |
| 117 | <a href="#">c4g9gA</a> | Alignment | not modelled | 100.0 | 15 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A; <b>PDB Molecule:</b> alpha/beta hydrolase fold protein;<br><b>PDBTitle:</b> crystal structures of n-acyl homoserine lactonase aidh e219g mutant  |
| 118 | <a href="#">c3e0xB</a> | Alignment | not modelled | 100.0 | 17 | <b>PDB header:</b> structural genomics, unknown function<br><b>Chain:</b> B; <b>PDB Molecule:</b> lipase-esterase related protein;<br><b>PDBTitle:</b> the crystal structure of a lipase-esterase related protein2 from clostridium acetobutylicum atcc 824               |
| 119 | <a href="#">d1r3da</a> | Alignment | not modelled | 100.0 | 14 | <b>Fold:</b> alpha/beta-Hydrolases<br><b>Superfamily:</b> alpha/beta-Hydrolases<br><b>Family:</b> Hypothetical protein VC1974   |
| 120 | <a href="#">c6azdA</a> | Alignment | not modelled | 100.0 | 18 | <b>PDB header:</b> hydrolase<br><b>Chain:</b> A; <b>PDB Molecule:</b> ppkai2-like h;<br><b>PDBTitle:</b> crystal structure of physcomitrella patens kai2-like h   |