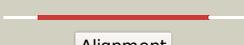
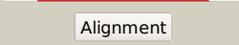
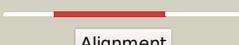
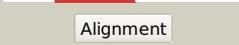
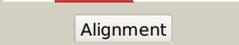
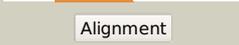
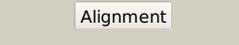
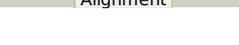


Phyre2

| | |
|---------------|---------------------------------|
| Email | mdejesus@rockefeller.edu |
| Description | RVBD1315_(murA)_1470327_1471583 |
| Date | Wed Jul 31 22:05:41 BST 2019 |
| Unique Job ID | 662c6ef5fc59993d |

Detailed template information

| # | Template | Alignment Coverage | 3D Model | Confidence | % i.d. | Template Information |
|----|-------------------------|---|---|------------|--------|--|
| 1 | c3r38A_ |  Alignment |  | 100.0 | 48 | PDB header: transferase Chain: A: PDB Molecule: udp-n-acetylglucosamine 1-carboxyvinyltransferase 1; PDBTitle: 2.23 angstrom resolution crystal structure of udp-n-acetylglucosamine2 1-carboxyvinyltransferase (mura) from listeria monocytogenes egd-e |
| 2 | c5u4hB_ |  Alignment |  | 100.0 | 46 | PDB header: lipid-binding protein Chain: B: PDB Molecule: udp-n-acetylglucosamine 1-carboxyvinyltransferase; PDBTitle: 1.05 angstrom resolution crystal structure of udp-n-acetylglucosamine2 1-carboxyvinyltransferase from acinetobacter baumannii in covalently3 bound complex with (2r)-2-(phosphonoxy)propanoic acid. |
| 3 | c5wi5C_ |  Alignment |  | 100.0 | 47 | PDB header: transferase Chain: C: PDB Molecule: udp-n-acetylglucosamine 1-carboxyvinyltransferase 1; PDBTitle: 2.0 angstrom resolution crystal structure of udp-n-acetylglucosamine2 1-carboxyvinyltransferase from streptococcus pneumoniae in complex3 with uridine-diphosphate-2(n-acetylglucosaminy) butyric acid, (2r)-4 2-(phosphonoxy)propanoic acid and magnesium. |
| 4 | c5uj5B_ |  Alignment |  | 100.0 | 40 | PDB header: hydrolase,oxidoreductase Chain: B: PDB Molecule: udp-n-acetylglucosamine 1-carboxyvinyltransferase; PDBTitle: 2.45 angstrom resolution crystal structure of udp-n-acetylglucosamine2 1-carboxyvinyltransferase from campylobacter jejuni. |
| 5 | d1uaea_ |  Alignment |  | 100.0 | 45 | Fold: IF3-like Superfamily: EPT/RTPC-like Family: Enolpyruvate transferase, EPT |
| 6 | c5bq2C_ |  Alignment |  | 100.0 | 44 | PDB header: transferase Chain: C: PDB Molecule: udp-n-acetylglucosamine 1-carboxyvinyltransferase; PDBTitle: crystal structure of udp-n-acetylglucosamine 1-carboxyvinyltransferase2 (udp-n-acetylglucosamine enolpyruvyl transferase, ept) from3 pseudomonas aeruginosa |
| 7 | d1ejda_ |  Alignment |  | 100.0 | 44 | Fold: IF3-like Superfamily: EPT/RTPC-like Family: Enolpyruvate transferase, EPT |
| 8 | c2yvwa_ |  Alignment |  | 100.0 | 40 | PDB header: transferase Chain: A: PDB Molecule: udp-n-acetylglucosamine 1-carboxyvinyltransferase; PDBTitle: crystal structure of udp-n-acetylglucosamine 1-carboxyvinyltransferase2 from aquifex aeolicus vf5 |
| 9 | c3zh3A_ |  Alignment |  | 100.0 | 39 | PDB header: transferase Chain: A: PDB Molecule: udp-n-acetylglucosamine 1-carboxyvinyltransferase; PDBTitle: crystal structure of s. pneumoniae d39 native mura1 |
| 10 | c4fqdA_ |  Alignment |  | 100.0 | 29 | PDB header: transferase Chain: A: PDB Molecule: niko protein; PDBTitle: crystal structure of the enolpyruvyl transferase niko from2 streptomyces tendae |
| 11 | c3rmtB_ |  Alignment |  | 100.0 | 23 | PDB header: transferase Chain: B: PDB Molecule: 3-phosphoshikimate 1-carboxyvinyltransferase 1; PDBTitle: crystal structure of putative 5-enolpyruvoylshikimate-3-phosphate2 synthase from bacillus halodurans c-125 |

| | | | | | | |
|----|-------------------------|---|---|-------|----|--|
| 12 | d1g6sa_ |  Alignment |  | 100.0 | 20 | Fold: IF3-like Superfamily: EPT/RTPC-like Family: Enolpyruvate transferase, EPT |
| 13 | c3roiA_ |  Alignment |  | 100.0 | 20 | PDB header: transferase Chain: A: PDB Molecule: 3-phosphoshikimate 1-carboxyvinyltransferase; PDBTitle: 2.20 angstrom resolution structure of 3-phosphoshikimate 1-2 carboxyvinyltransferase (aroa) from coxiella burnetii |
| 14 | c5xwbB_ |  Alignment |  | 100.0 | 20 | PDB header: transferase Chain: B: PDB Molecule: 3-phosphoshikimate 1-carboxyvinyltransferase; PDBTitle: crystal structure of 5-enolpyruvylshikimate-3-phosphate synthase from2 a psychrophilic bacterium, colwellia psychrerythraea |
| 15 | c2o0zA_ |  Alignment |  | 100.0 | 22 | PDB header: transferase Chain: A: PDB Molecule: 3-phosphoshikimate 1-carboxyvinyltransferase; PDBTitle: mycobacterium tuberculosis epsp synthase in complex with product (eps) |
| 16 | c5bufA_ |  Alignment |  | 100.0 | 22 | PDB header: transferase Chain: A: PDB Molecule: 3-phosphoshikimate 1-carboxyvinyltransferase; PDBTitle: 2.37 angstrom structure of epsp synthase from acinetobacter baumannii |
| 17 | c2pqaA_ |  Alignment |  | 100.0 | 23 | PDB header: transferase Chain: A: PDB Molecule: 3-phosphoshikimate 1-carboxyvinyltransferase; PDBTitle: a100g cp4 epsps liganded with (r)-difluoromethyl tetrahedral reaction2 intermediate analog |
| 18 | d1rf6a_ |  Alignment |  | 100.0 | 23 | Fold: IF3-like Superfamily: EPT/RTPC-like Family: Enolpyruvate transferase, EPT |
| 19 | d1p88a_ |  Alignment |  | 100.0 | 19 | Fold: IF3-like Superfamily: EPT/RTPC-like Family: Enolpyruvate transferase, EPT |
| 20 | d1qmh2 |  Alignment |  | 97.3 | 18 | Fold: IF3-like Superfamily: EPT/RTPC-like Family: RNA 3'-terminal phosphate cyclase, RTPC |
| 21 | c1qmiC_ |  Alignment | not modelled | 95.4 | 16 | PDB header: ligase Chain: C: PDB Molecule: rna 3'-terminal phosphate cyclase; PDBTitle: crystal structure of rna 3'-terminal phosphate cyclase, an2 ubiquitous enzyme with unusual topology |
| 22 | c4o8jB_ |  Alignment | not modelled | 95.2 | 18 | PDB header: ligase/rna Chain: B: PDB Molecule: rna 3'-terminal phosphate cyclase; PDBTitle: crystal structure of rtca, the rna 3'-terminal phosphate cyclase from2 pyrococcus horikoshii, in complex with racaaa3'phosphate and adenine. |
| 23 | c3pqvD_ |  Alignment | not modelled | 85.4 | 12 | PDB header: unknown function Chain: D: PDB Molecule: rcl1 protein; PDBTitle: cyclase homolog |
| 24 | c3g0tA_ |  Alignment | not modelled | 56.6 | 19 | PDB header: transferase Chain: A: PDB Molecule: putative aminotransferase; PDBTitle: crystal structure of putative aspartate aminotransferase (np_905498.1)2 from porphyromonas gingivalis w83 at 1.75 a resolution |
| 25 | c4gtnA_ |  Alignment | not modelled | 47.7 | 15 | PDB header: transferase Chain: A: PDB Molecule: anthranilate phosphoribosyltransferase; PDBTitle: structure of anthranilate phosphoribosyl transferase from2 acinetobacter baylyi |
| 26 | c1o17A_ |  Alignment | not modelled | 45.3 | 8 | PDB header: transferase Chain: A: PDB Molecule: anthranilate phosphoribosyltransferase; PDBTitle: anthranilate phosphoribosyl-transferase (trpd) |
| 27 | c4muoB_ |  Alignment | not modelled | 43.5 | 10 | PDB header: dna binding protein Chain: B: PDB Molecule: uncharacterized protein ybib; PDBTitle: the trpd2 enzyme from e.coli: ybib |
| 28 | c2hzfA_ |  Alignment | not modelled | 40.7 | 16 | PDB header: electron transport, oxidoreductase Chain: A: PDB Molecule: glutaredoxin-1; PDBTitle: crystal structures of a poxviral glutaredoxin in the |

| | | | | | | |
|----|-------------------------|-----------|--------------|------|----|---|
| | | | | | | oxidized and2 reduced states show redox-correlated structural changes |
| 29 | d1w2za3 | Alignment | not modelled | 37.7 | 19 | Fold: Cystatin-like Superfamily: Amine oxidase N-terminal region Family: Amine oxidase N-terminal region |
| 30 | c3gmgB_ | Alignment | not modelled | 25.0 | 15 | PDB header: structural genomics, unknown function Chain: B: PDB Molecule: uncharacterized protein rv1825/mt1873; PDBTitle: crystal structure of an uncharacterized conserved protein from2 mycobacterium tuberculosis |
| 31 | c2dsjA_ | Alignment | not modelled | 21.1 | 15 | PDB header: transferase Chain: A: PDB Molecule: pyrimidine-nucleoside (thymidine) phosphorylase; PDBTitle: crystal structure of project id tt0128 from thermus thermophilus hb8 |
| 32 | c1v8gB_ | Alignment | not modelled | 20.0 | 14 | PDB header: transferase Chain: B: PDB Molecule: anthranilate phosphoribosyltransferase; PDBTitle: crystal structure of anthranilate phosphoribosyltransferase2 (trpd) from thermus thermophilus hb8 |
| 33 | c5kinD_ | Alignment | not modelled | 19.6 | 18 | PDB header: lyase Chain: D: PDB Molecule: tryptophan synthase beta chain; PDBTitle: crystal structure of tryptophan synthase alpha beta complex from2 streptococcus pneumoniae |
| 34 | c4kjeA_ | Alignment | not modelled | 17.9 | 11 | PDB header: oxidoreductase Chain: A: PDB Molecule: glutaredoxin; PDBTitle: atomic resolution structure of pfgrx1 |
| 35 | c3pnxF_ | Alignment | not modelled | 16.5 | 0 | PDB header: transferase Chain: F: PDB Molecule: putative sulfurtransferase dsre; PDBTitle: crystal structure of a putative sulfurtransferase dsre (swol_2425)2 from syntrophomonas wolfei str. goettingen at 1.92 a resolution |
| 36 | c4j8cA_ | Alignment | not modelled | 14.8 | 23 | PDB header: chaperone Chain: A: PDB Molecule: hsc70-interacting protein; PDBTitle: crystal structure of the dimerization domain of hsc70-interacting2 protein |
| 37 | c4j8cB_ | Alignment | not modelled | 14.8 | 23 | PDB header: chaperone Chain: B: PDB Molecule: hsc70-interacting protein; PDBTitle: crystal structure of the dimerization domain of hsc70-interacting2 protein |
| 38 | c2bpgB_ | Alignment | not modelled | 14.1 | 14 | PDB header: transferase Chain: B: PDB Molecule: anthranilate phosphoribosyltransferase; PDBTitle: anthranilate phosphoribosyltransferase (trpd) from2 mycobacterium tuberculosis (apo structure) |
| 39 | d1v8za1 | Alignment | not modelled | 14.1 | 16 | Fold: Tryptophan synthase beta subunit-like PLP-dependent enzymes Superfamily: Tryptophan synthase beta subunit-like PLP-dependent enzymes Family: Tryptophan synthase beta subunit-like PLP-dependent enzymes |
| 40 | c4ga5H_ | Alignment | not modelled | 13.7 | 13 | PDB header: transferase Chain: H: PDB Molecule: putative thymidine phosphorylase; PDBTitle: crystal structure of amp phosphorylase c-terminal deletion mutant in2 the apo-form |
| 41 | d2o8ra3 | Alignment | not modelled | 13.3 | 11 | Fold: Phospholipase D/nuclease Superfamily: Phospholipase D/nuclease Family: Polyphosphate kinase C-terminal domain |
| 42 | c5fqIA_ | Alignment | not modelled | 13.2 | 14 | PDB header: hydrolase Chain: A: PDB Molecule: iduronate-2-sulfatase; PDBTitle: insights into hunter syndrome from the structure of iduronate-2-2 sulfatase |
| 43 | d1o17a2 | Alignment | not modelled | 12.9 | 10 | Fold: Nucleoside phosphorylase/phosphoribosyltransferase catalytic domain Superfamily: Nucleoside phosphorylase/phosphoribosyltransferase catalytic domain Family: Nucleoside phosphorylase/phosphoribosyltransferase catalytic domain |
| 44 | c2cb1A_ | Alignment | not modelled | 12.8 | 22 | PDB header: lyase Chain: A: PDB Molecule: o-acetyl homoserine sulfhydrylase; PDBTitle: crystal structure of o-acetyl homoserine sulfhydrylase2 from thermus thermophilus hb8,oah2. |
| 45 | d1jcb2 | Alignment | not modelled | 12.4 | 24 | Fold: Putative DNA-binding domain Superfamily: Putative DNA-binding domain Family: Domains B1 and B5 of PheRS-beta, PheT |
| 46 | c3juxA_ | Alignment | not modelled | 12.0 | 8 | PDB header: protein transport Chain: A: PDB Molecule: protein translocase subunit seca; PDBTitle: structure of the translocation atpase seca from thermotoga2 maritima |
| 47 | c3h5qA_ | Alignment | not modelled | 12.0 | 21 | PDB header: transferase Chain: A: PDB Molecule: pyrimidine-nucleoside phosphorylase; PDBTitle: crystal structure of a putative pyrimidine-nucleoside phosphorylase2 from staphylococcus aureus |
| 48 | c3nr6A_ | Alignment | not modelled | 11.9 | 13 | PDB header: hydrolase/inhibitor Chain: A: PDB Molecule: protease p14; PDBTitle: crystal structure of xenotropic murine leukemia virus-related virus2 (xmrv) protease |
| 49 | c4i2uA_ | Alignment | not modelled | 10.9 | 14 | PDB header: oxidoreductase Chain: A: PDB Molecule: glutaredoxin; PDBTitle: crystal structure of the reduced glutaredoxin from chlorella2 sorokiniana t-89 in complex with glutathione |
| 50 | d1jhba_ | Alignment | not modelled | 10.7 | 16 | Fold: Thioredoxin fold Superfamily: Thioredoxin-like Family: Thioltransferase |
| 51 | c3dinB_ | Alignment | not modelled | 10.7 | 8 | PDB header: membrane protein, protein transport Chain: B: PDB Molecule: protein translocase subunit seca; PDBTitle: crystal structure of the protein-translocation complex formed by the2 secy channel and the seca atpase |
| 52 | c2gjhA_ | Alignment | not modelled | 9.7 | 29 | PDB header: de novo protein Chain: A: PDB Molecule: designed protein; PDBTitle: nmr structure of cfr (c-terminal fragment of2 computationally designed novel-topology protein top7) PDB header: lyase |

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|----|-------------------------|-----------|--------------|-----|----|--|
| 53 | c5tchH_ | Alignment | not modelled | 9.6 | 20 | Chain: H: PDB Molecule: tryptophan synthase beta chain; PDBTitle: crystal structure of tryptophan synthase from m. tuberculosis -2 ligand-free form, trpa-g66v mutant |
| 54 | c1khdD_ | Alignment | not modelled | 9.5 | 11 | PDB header: transferase Chain: D: PDB Molecule: anthranilate phosphoribosyltransferase; PDBTitle: crystal structure analysis of the anthranilate2 phosphoribosyltransferase from erwinia carotovora at 1.9 resolution3 (current name, pectobacterium carotovorum) |
| 55 | d1nh2a1 | Alignment | not modelled | 9.1 | 18 | Fold: TBP-like Superfamily: TATA-box binding protein-like Family: TATA-box binding protein (TBP), C-terminal domain |
| 56 | d2dy1a4 | Alignment | not modelled | 9.1 | 24 | Fold: Ferredoxin-like Superfamily: EF-G C-terminal domain-like Family: EF-G/eEF-2 domains III and V |
| 57 | d1lxja_ | Alignment | not modelled | 9.0 | 11 | Fold: Ferredoxin-like Superfamily: MTH1187/YkoF-like Family: MTH1187-like |
| 58 | d1cdwa1 | Alignment | not modelled | 8.7 | 11 | Fold: TBP-like Superfamily: TATA-box binding protein-like Family: TATA-box binding protein (TBP), C-terminal domain |
| 59 | c5nofB_ | Alignment | not modelled | 8.2 | 21 | PDB header: transferase Chain: B: PDB Molecule: anthranilate phosphoribosyltransferase; PDBTitle: anthranilate phosphoribosyltransferase from thermococcus kodakaraensis |
| 60 | d1in0a2 | Alignment | not modelled | 7.5 | 21 | Fold: Ferredoxin-like Superfamily: YajQ-like Family: YajQ-like |
| 61 | d1qnaa1 | Alignment | not modelled | 7.3 | 11 | Fold: TBP-like Superfamily: TATA-box binding protein-like Family: TATA-box binding protein (TBP), C-terminal domain |
| 62 | c2o8rA_ | Alignment | not modelled | 7.1 | 11 | PDB header: transferase Chain: A: PDB Molecule: polyphosphate kinase; PDBTitle: crystal structure of polyphosphate kinase from porphyromonas2 gingivalis |
| 63 | c1nl3B_ | Alignment | not modelled | 6.8 | 17 | PDB header: protein transport Chain: B: PDB Molecule: preprotein translocase seca 1 subunit; PDBTitle: crystal structure of the seca protein translocation atpase2 from mycobacterium tuberculosis in apo form |
| 64 | d1x9za_ | Alignment | not modelled | 6.8 | 27 | Fold: DNA mismatch repair protein MutL Superfamily: DNA mismatch repair protein MutL Family: DNA mismatch repair protein MutL |
| 65 | c4pwyA_ | Alignment | not modelled | 6.7 | 13 | PDB header: transferase Chain: A: PDB Molecule: calmodulin-lysine n-methyltransferase; PDBTitle: crystal structure of a calmodulin-lysine n-methyltransferase fragment |
| 66 | d1yqha1 | Alignment | not modelled | 6.7 | 23 | Fold: Ferredoxin-like Superfamily: MTH1187/YkoF-like Family: MTH1187-like |
| 67 | c3ndnC_ | Alignment | not modelled | 6.6 | 22 | PDB header: lyase Chain: C: PDB Molecule: o-succinylhomoserine sulfhydrylase; PDBTitle: crystal structure of o-succinylhomoserine sulfhydrylase from2 mycobacterium tuberculosis covalently bound to pyridoxal-5-phosphate |
| 68 | c2cxiA_ | Alignment | not modelled | 6.5 | 15 | PDB header: ligase Chain: A: PDB Molecule: phenylalanyl-trna synthetase beta chain; PDBTitle: crystal structure of an n-terminal fragment of the phenylalanyl-trna2 synthetase beta-subunit from pyrococcus horikoshii |
| 69 | c6ic4H_ | Alignment | not modelled | 6.4 | 23 | PDB header: protein transport Chain: H: PDB Molecule: abc transporter permease; PDBTitle: cryo-em structure of the a. baumannii mia complex at 8.7 a resolution |
| 70 | c2epiA_ | Alignment | not modelled | 6.1 | 22 | PDB header: structural genomics, unknown function Chain: A: PDB Molecule: upf0045 protein mj1052; PDBTitle: crystal structure pf hypothetical protein mj1052 from2 methanocaldococcus jannaschii (form 2) |
| 71 | c5zvlB_ | Alignment | not modelled | 5.9 | 12 | PDB header: oxidoreductase Chain: B: PDB Molecule: glutaredoxin; PDBTitle: crystal structure of wheat glutaredoxin |
| 72 | c3mjsA_ | Alignment | not modelled | 5.9 | 15 | PDB header: oxidoreductase Chain: A: PDB Molecule: amphb; PDBTitle: structure of a-type ketoreductases from modular polyketide synthase |
| 73 | c3nbxX_ | Alignment | not modelled | 5.9 | 12 | PDB header: hydrolase Chain: X: PDB Molecule: atpase rava; PDBTitle: crystal structure of e. coli rava (regulatory atpase variant a) in2 complex with adp |
| 74 | d1nh8a2 | Alignment | not modelled | 5.7 | 14 | Fold: Ferredoxin-like Superfamily: GlnB-like Family: ATP phosphoribosyltransferase (ATP-PRTase, HisG), regulatory C-terminal domain |
| 75 | c4gduB_ | Alignment | not modelled | 5.6 | 18 | PDB header: hydrolase Chain: B: PDB Molecule: l-asparaginase; PDBTitle: crystal structure of sulfate-bound human l-asparaginase protein |
| 76 | c4uaqA_ | Alignment | not modelled | 5.6 | 11 | PDB header: protein transport Chain: A: PDB Molecule: protein translocase subunit seca 2; PDBTitle: crystal structure of the accessory translocation atpase, seca2, from2 mycobacterium tuberculosis |
| 77 | d1ttea1 | Alignment | not modelled | 5.5 | 24 | Fold: RuvA C-terminal domain-like Superfamily: UBA-like Family: UBA domain |
| 78 | c4n0bA_ | Alignment | not modelled | 5.3 | 15 | PDB header: transcription activator Chain: A: PDB Molecule: hth-type transcriptional regulatory protein gabr; PDBTitle: crystal structure of bacillus subtilis gabr, an autorepressor |

| | | | | | |
|----|------------------------|-----------|--------------|-----|---|
| | | | | | and2 transcriptional activator of gabt |
| 79 | c1otpA | Alignment | not modelled | 5.2 | 16 PDB header: phosphorylase Chain: A: PDB Molecule: thymidine phosphorylase; PDBTitle: structural and theoretical studies suggest domain movement produces an2 active conformation of thymidine phosphorylase |
| 80 | c3h8qB | Alignment | not modelled | 5.2 | 15 PDB header: oxidoreductase Chain: B: PDB Molecule: thioredoxin reductase 3; PDBTitle: crystal structure of glutaredoxin domain of human thioredoxin2 reductase 3 |
| 81 | c3s8iA | Alignment | not modelled | 5.2 | 8 PDB header: hydrolase Chain: A: PDB Molecule: protein ddi1 homolog 1; PDBTitle: the retroviral-like protease (rvp) domain of human ddi1 |
| 82 | c2k6xA | Alignment | not modelled | 5.2 | 17 PDB header: transcription Chain: A: PDB Molecule: rna polymerase sigma factor rpod; PDBTitle: autoregulation of a group 1 bacterial sigma factor involves2 the formation of a region 1.1- induced compacted structure |
| 83 | c3ke2A | Alignment | not modelled | 5.1 | 17 PDB header: unknown function Chain: A: PDB Molecule: uncharacterized protein yp_928783.1; PDBTitle: crystal structure of a duf2131 family protein (sama_2911) from2 shewanella amazonensis sb2b at 2.50 a resolution |