
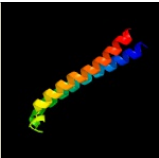

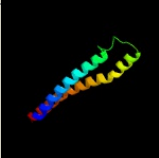
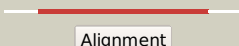
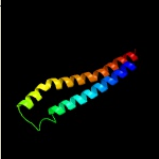
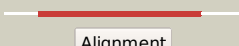
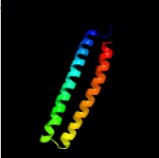
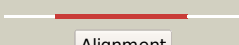
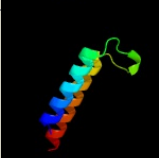
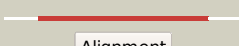
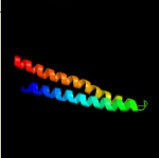

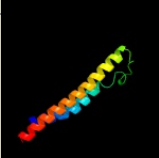

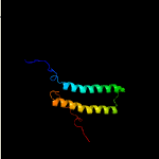

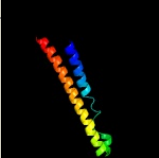
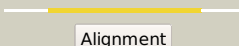
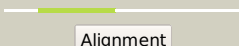
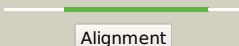

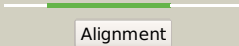
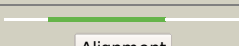

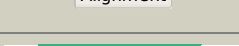


Phyre2

Email mdejesus@rockefeller.edu
 Description RVBD3019c_(esxR)_3378721_3379011
 Date Thu Aug 8 16:20:19 BST 2019
 Unique Job ID b0f3caa0b624be2b

Detailed template information

| # | Template | Alignment Coverage | 3D Model | Confidence | % i.d. | Template Information |
|----|-------------------------|--------------------|----------|------------|--------|---|
| 1 | c2kg7B_ | Alignment | | 99.9 | 84 | PDB header: unknown function Chain: B: PDB Molecule: esat-6-like protein eshx; PDBTitle: structure and features of the complex formed by the tuberculosis2 virulence factors rv0287 and rv0288 |
| 2 | d1wa8b1 | Alignment | | 99.9 | 23 | Fold: Ferritin-like Superfamily: EsxAB dimer-like Family: ESAT-6 like |
| 3 | c4lwsA_ | Alignment | | 99.8 | 18 | PDB header: unknown function Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: esxa : esxb (semet) hetero-dimer from thermomonospora curvata |
| 4 | c3gvmA_ | Alignment | | 99.8 | 15 | PDB header: viral protein Chain: A: PDB Molecule: putative uncharacterized protein sag1039; PDBTitle: structure of the homodimeric wxg-100 family protein from streptococcus2 agalactiae |
| 5 | d1wa8a1 | Alignment | | 99.8 | 14 | Fold: Ferritin-like Superfamily: EsxAB dimer-like Family: ESAT-6 like |
| 6 | c3zbcC_ | Alignment | | 99.8 | 11 | PDB header: unknown function Chain: C: PDB Molecule: esxa; PDBTitle: geobacillus thermodenitrificans esxa crystal form i |
| 7 | c4lwsB_ | Alignment | | 99.8 | 15 | PDB header: unknown function Chain: B: PDB Molecule: uncharacterized protein; PDBTitle: esxa : esxb (semet) hetero-dimer from thermomonospora curvata |
| 8 | c4iogD_ | Alignment | | 99.8 | 20 | PDB header: unknown function Chain: D: PDB Molecule: secreted protein esxb; PDBTitle: the crystal structure of a secreted protein esxb (wild-type, in p212 space group) from bacillus anthracis str. Sterne |
| 9 | c2vs0B_ | Alignment | | 99.7 | 13 | PDB header: cell invasion Chain: B: PDB Molecule: virulence factor esxa; PDBTitle: structural analysis of homodimeric staphylococcal aureus2 virulence factor esxa |
| 10 | c4i0xl_ | Alignment | | 99.0 | 15 | PDB header: structural genomics, unknown function Chain: J: PDB Molecule: esat-6-like protein mab_3113; PDBTitle: crystal structure of the mycobacterium abscessus esxef (mab_3112-2 mab_3113) complex |
| 11 | c4i0xA_ | Alignment | | 98.9 | 16 | PDB header: structural genomics, unknown function Chain: A: PDB Molecule: esat-6-like protein mab_3112; PDBTitle: crystal structure of the mycobacterium abscessus esxef (mab_3112-2 mab_3113) complex |

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|----|-------------------------|---|---|------|-----|--|
| 12 | c3q4hB_ |  Alignment |  | 98.6 | 62 | PDB header: metal transport Chain: B: PDB Molecule: low molecular weight protein antigen 7; PDBTitle: crystal structure of the mycobacterium smegmatis esxg complex2 (msmeg_0620-msmeg_0621) |
| 13 | d2g38b1 |  Alignment |  | 97.7 | 14 | Fold: Ferritin-like Superfamily: PE/PPE dimer-like Family: PPE |
| 14 | c2g38B_ |  Alignment |  | 97.7 | 14 | PDB header: structural genomics, unknown function Chain: B: PDB Molecule: ppe family protein; PDBTitle: a pe/ppe protein complex from mycobacterium tuberculosis |
| 15 | d2gtsa1 |  Alignment |  | 97.4 | 8 | Fold: Ferritin-like Superfamily: HP0062-like Family: HP0062-like |
| 16 | c3h6pD_ |  Alignment |  | 97.2 | 100 | PDB header: structural genomics, unknown function Chain: D: PDB Molecule: esat-6-like protein esxr; PDBTitle: crystal structure of rv3019c-rv3020c from mycobacterium tuberculosis |
| 17 | c5xfsB_ |  Alignment |  | 97.1 | 19 | PDB header: protein transport Chain: B: PDB Molecule: ppe family protein ppe15; PDBTitle: crystal structure of pe8-ppe15 in complex with esp5 from m.2 tuberculosis |
| 18 | c4wj2A_ |  Alignment |  | 94.8 | 18 | PDB header: unknown function Chain: A: PDB Molecule: antigen mtb48; PDBTitle: mycobacterial protein |
| 19 | c2kg7A_ |  Alignment |  | 94.1 | 17 | PDB header: unknown function Chain: A: PDB Molecule: uncharacterized protein esxg (pe family protein); PDBTitle: structure and features of the complex formed by the tuberculosis2 virulence factors rv0287 and rv0288 |
| 20 | c4xy3A_ |  Alignment |  | 87.1 | 14 | PDB header: protein transport Chain: A: PDB Molecule: esx-1 secretion-associated protein espb; PDBTitle: structure of esx-1 secreted protein espb |
| 21 | c3h6pB_ |  Alignment | not modelled | 71.9 | 13 | PDB header: structural genomics, unknown function Chain: B: PDB Molecule: esat-6 like protein esxs; PDBTitle: crystal structure of rv3019c-rv3020c from mycobacterium tuberculosis |
| 22 | c5wlgA_ |  Alignment | not modelled | 66.9 | 17 | PDB header: motor protein Chain: A: PDB Molecule: capsid assembly scaffolding protein,myosin-7,microtubule- PDBTitle: crystal structure of amino acids 1677-1755 of human beta cardiac2 myosin fused to gp7 and eb1 |
| 23 | d1aepa_ |  Alignment | not modelled | 53.1 | 16 | Fold: Apolipoprotein-III Superfamily: Apolipoprotein-III Family: Apolipoprotein-III |
| 24 | c1ls4A_ |  Alignment | not modelled | 52.8 | 16 | PDB header: lipid transport Chain: A: PDB Molecule: apolipoprotein-iii; PDBTitle: nmr structure of apolipoprotein-iii from locusta migratoria |
| 25 | c4gzsA_ |  Alignment | not modelled | 51.2 | 18 | PDB header: structural genomics, unknown function Chain: A: PDB Molecule: esat-6-like protein 6; PDBTitle: crystal structure of the mycobacterium tuberculosis h37rv esxop2 (rv2346c-rv2347c) complex in space group c2221 |
| 26 | c3ogiC_ |  Alignment | not modelled | 50.7 | 19 | PDB header: structural genomics, unknown function Chain: C: PDB Molecule: putative esat-6-like protein 6; PDBTitle: crystal structure of the mycobacterium tuberculosis h37rv esxop2 complex (rv2346c-rv2347c) |
| 27 | c4njiA_ |  Alignment | not modelled | 48.3 | 10 | PDB header: viral protein Chain: A: PDB Molecule: s protein; PDBTitle: crystal structure of middle east respiratory syndrome coronavirus s22 protein fusion core |
| 28 | c3n8uB_ |  Alignment | not modelled | 42.7 | 11 | PDB header: hydrolase Chain: B: PDB Molecule: simelysin peptidase; PDBTitle: crystal structure of an imelysin peptidase (bacova_03801) from2 bacteroides ovatus at 1.44 a resolution |

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|----|-------------------------|-----------|--------------|------|----|--|
| 29 | c1wdfA_ | Alignment | not modelled | 38.7 | 8 | PDB header: viral protein Chain: A: PDB Molecule: e2 glycoprotein; PDBTitle: crystal structure of mhv spike protein fusion core |
| 30 | c1p68A_ | Alignment | not modelled | 34.6 | 30 | PDB header: de novo protein Chain: A: PDB Molecule: de novo designed protein s-824; PDBTitle: solution structure of s-824, a de novo designed four helix2 bundle |
| 31 | c6b3oB_ | Alignment | not modelled | 30.4 | 8 | PDB header: viral protein Chain: B: PDB Molecule: spike glycoprotein; PDBTitle: tectonic conformational changes of a coronavirus spike glycoprotein2 promote membrane fusion |
| 32 | c1qu7A_ | Alignment | not modelled | 29.0 | 18 | PDB header: signaling protein Chain: A: PDB Molecule: methyl-accepting chemotaxis protein i; PDBTitle: four helical-bundle structure of the cytoplasmic domain of a serine2 chemotaxis receptor |
| 33 | c4ug1A_ | Alignment | not modelled | 23.1 | 11 | PDB header: cell cycle Chain: A: PDB Molecule: cell cycle protein gpsb; PDBTitle: gpsb n-terminal domain |
| 34 | c2bezC_ | Alignment | not modelled | 20.9 | 13 | PDB header: viral protein Chain: C: PDB Molecule: e2 glycoprotein; PDBTitle: structure of a proteolitically resistant core from the severe acute2 respiratory syndrome coronavirus s2 fusion protein |
| 35 | c5x5fC_ | Alignment | not modelled | 20.5 | 10 | PDB header: viral protein Chain: C: PDB Molecule: s protein; PDBTitle: prefusion structure of mers-cov spike glycoprotein, conformation 2 |
| 36 | c6nb3B_ | Alignment | not modelled | 19.1 | 10 | PDB header: virus Chain: B: PDB Molecule: spike glycoprotein; PDBTitle: mers-cov complex with human neutralizing lca60 antibody fab fragment2 (state 1) |
| 37 | c6nzkB_ | Alignment | not modelled | 19.0 | 8 | PDB header: viral protein Chain: B: PDB Molecule: spike surface glycoprotein; PDBTitle: structural basis for human coronavirus attachment to sialic acid2 receptors |
| 38 | d2j0na1 | Alignment | not modelled | 19.0 | 11 | Fold: lpaD-like Superfamily: lpaD-like Family: lpaD-like |
| 39 | c6gqaD_ | Alignment | not modelled | 19.0 | 22 | PDB header: cell cycle Chain: D: PDB Molecule: cell cycle protein gpsb; PDBTitle: cell division regulator s. pneumoniae gpsb |
| 40 | c5i08A_ | Alignment | not modelled | 17.0 | 10 | PDB header: viral protein Chain: A: PDB Molecule: spike glycoprotein, envelope glycoprotein chimera; PDBTitle: prefusion structure of a human coronavirus spike protein |
| 41 | c2wukD_ | Alignment | not modelled | 16.3 | 6 | PDB header: cell cycle Chain: D: PDB Molecule: septum site-determining protein diviva; PDBTitle: diviva n-terminal domain, f17a mutant |
| 42 | c3iv1F_ | Alignment | not modelled | 15.6 | 13 | PDB header: hydrolase Chain: F: PDB Molecule: tumor susceptibility gene 101 protein; PDBTitle: coiled-coil domain of tumor susceptibility gene 101 |
| 43 | c4y66D_ | Alignment | not modelled | 15.6 | 6 | PDB header: cell cycle Chain: D: PDB Molecule: putative tbpip family protein; PDBTitle: crystal structure of giardia lamblia hop2-mnd1 complex |
| 44 | c3vp8B_ | Alignment | not modelled | 15.4 | 13 | PDB header: transcription Chain: B: PDB Molecule: general transcriptional corepressor tup1; PDBTitle: crystal structure of the n-terminal domain of the yeast general2 corepressor tup1p |
| 45 | c3jc1C_ | Alignment | not modelled | 14.3 | 8 | PDB header: viral protein Chain: C: PDB Molecule: spike glycoprotein; PDBTitle: cryo-electron microscopy structure of a coronavirus spike glycoprotein2 trimer |
| 46 | d1st6a6 | Alignment | not modelled | 14.1 | 10 | Fold: Four-helical up-and-down bundle Superfamily: alpha-catenin/vinculin-like Family: alpha-catenin/vinculin |
| 47 | c2l10A_ | Alignment | not modelled | 13.9 | 14 | PDB header: structural protein Chain: A: PDB Molecule: taln-1; PDBTitle: structure of the talin rod residues, domain c |
| 48 | c3ok8A_ | Alignment | not modelled | 13.1 | 15 | PDB header: protein binding Chain: A: PDB Molecule: brain-specific angiogenesis inhibitor 1-associated protein PDBTitle: i-bar of pinkbar |
| 49 | c3g67A_ | Alignment | not modelled | 12.8 | 7 | PDB header: signaling protein Chain: A: PDB Molecule: methyl-accepting chemotaxis protein; PDBTitle: crystal structure of a soluble chemoreceptor from thermotoga2 maritima |
| 50 | c5xlrC_ | Alignment | not modelled | 12.8 | 13 | PDB header: viral protein Chain: C: PDB Molecule: spike glycoprotein; PDBTitle: structure of sars-cov spike glycoprotein |
| 51 | c1nohB_ | Alignment | not modelled | 12.8 | 20 | PDB header: viral protein Chain: B: PDB Molecule: head morphogenesis protein; PDBTitle: the structure of bacteriophage phi29 scaffolding protein2 gp7 after prohead assembly |
| 52 | c1wyyB_ | Alignment | not modelled | 11.9 | 13 | PDB header: viral protein Chain: B: PDB Molecule: e2 glycoprotein; PDBTitle: post-fusion hairpin conformation of the sars coronavirus spike2 glycoprotein |
| 53 | c2d5kC_ | Alignment | not modelled | 11.8 | 8 | PDB header: metal binding protein Chain: C: PDB Molecule: dps family protein; PDBTitle: crystal structure of dps from staphylococcus aureus |
| 54 | d1h6ga1 | Alignment | not modelled | 11.5 | 15 | Fold: Four-helical up-and-down bundle Superfamily: alpha-catenin/vinculin-like Family: alpha-catenin/vinculin |
| 55 | c2pybC_ | Alianment | not modelled | 10.8 | 13 | PDB header: metal transport Chain: C: PDB Molecule: neutrophil activating protein; |

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|----|-------------------------|-----------|--------------|------|----|---|
| | | | | | | PDBTitle: napa protein from borrelia burgdorferi |
| 56 | c5wrgB_ | Alignment | not modelled | 10.6 | 13 | PDB header: virus like particle Chain: B: PDB Molecule: spike glycoprotein; PDBTitle: sars-cov spike glycoprotein |
| 57 | c6cs2A_ | Alignment | not modelled | 10.2 | 13 | PDB header: viral protein/hydrolase Chain: A: PDB Molecule: spike glycoprotein,fibrinin; PDBTitle: sars spike glycoprotein - human ace2 complex, stabilized variant, all2 ace2-bound particles |
| 58 | c5ijnS_ | Alignment | not modelled | 10.1 | 8 | PDB header: transport protein Chain: S: PDB Molecule: nuclear pore complex protein nup58; PDBTitle: composite structure of the inner ring of the human nuclear pore2 complex (32 copies of nup205) |
| 59 | c2oszA_ | Alignment | not modelled | 9.8 | 9 | PDB header: structural protein Chain: A: PDB Molecule: nucleoporin p58/p45; PDBTitle: structure of nup58/45 suggests flexible nuclear pore diameter by2 intermolecular sliding |
| 60 | c2pnvA_ | Alignment | not modelled | 8.9 | 9 | PDB header: membrane protein Chain: A: PDB Molecule: small conductance calcium-activated potassium PDBTitle: crystal structure of the leucine zipper domain of small-2 conductance ca2+-activated k+ (skca) channel from rattus3 norvegicus |
| 61 | c2ym0B_ | Alignment | not modelled | 8.7 | 12 | PDB header: cell invasion Chain: B: PDB Molecule: cell invasion protein sipd; PDBTitle: truncated sipd from salmonella typhimurium |
| 62 | c3swyB_ | Alignment | not modelled | 8.5 | 13 | PDB header: transport protein Chain: B: PDB Molecule: cyclic nucleotide-gated cation channel alpha-3; PDBTitle: cnga3 626-672 containing clz domain |
| 63 | d2fjca1 | Alignment | not modelled | 7.8 | 11 | Fold: Ferritin-like Superfamily: Ferritin-like Family: Ferritin |
| 64 | c5x5bB_ | Alignment | not modelled | 7.6 | 13 | PDB header: viral protein Chain: B: PDB Molecule: spike glycoprotein; PDBTitle: prefusion structure of sars-cov spike glycoprotein, conformation 2 |
| 65 | c1nfoA_ | Alignment | not modelled | 7.6 | 9 | PDB header: lipid transport Chain: A: PDB Molecule: apolipoprotein e2; PDBTitle: apolipoprotein e2 (apoe2, d154a mutation) |
| 66 | d1icha_ | Alignment | not modelled | 7.1 | 6 | Fold: DEATH domain Superfamily: DEATH domain Family: DEATH domain, DD |
| 67 | c1ichA_ | Alignment | not modelled | 7.1 | 6 | PDB header: apoptosis Chain: A: PDB Molecule: tumor necrosis factor receptor-1; PDBTitle: solution structure of the tumor necrosis factor receptor-12 death domain |
| 68 | c3swfA_ | Alignment | not modelled | 6.8 | 11 | PDB header: transport protein Chain: A: PDB Molecule: cgmp-gated cation channel alpha-1; PDBTitle: cnga1 621-690 containing clz domain |
| 69 | c3cazA_ | Alignment | not modelled | 6.6 | 8 | PDB header: signaling protein Chain: A: PDB Molecule: bar protein; PDBTitle: crystal structure of a bar protein from galdieria sulphuraria |
| 70 | c1kmiZ_ | Alignment | not modelled | 6.6 | 14 | PDB header: signaling protein Chain: Z: PDB Molecule: chemotaxis protein chez; PDBTitle: crystal structure of an e.coli chemotaxis protein, chez |
| 71 | c5t58N_ | Alignment | not modelled | 6.5 | 11 | PDB header: cell cycle Chain: N: PDB Molecule: klla0c15939p; PDBTitle: structure of the mind complex shows a regulatory focus of yeast2 kinetochore assembly |
| 72 | c6h9mA_ | Alignment | not modelled | 6.4 | 21 | PDB header: membrane protein Chain: A: PDB Molecule: coiled-coil domain-containing protein 90b, mitochondrial, PDBTitle: coiled-coil domain-containing protein 90b residues 43-125 from homo2 sapiens fused to a gcn4 adaptor |
| 73 | c5lkdB_ | Alignment | not modelled | 6.3 | 9 | PDB header: transferase Chain: B: PDB Molecule: glutathione s-transferase omega-like 2; PDBTitle: crystal structure of the xi glutathione transferase ecm4 from2 saccharomyces cerevisiae in complex with glutathione |
| 74 | c3tnuA_ | Alignment | not modelled | 6.2 | 12 | PDB header: cytosolic protein Chain: A: PDB Molecule: keratin, type i cytoskeletal 14; PDBTitle: heterocomplex of coil 2b domains of human intermediate filament2 proteins, keratin 5 (krt5) and keratin 14 (krt14) |
| 75 | c5uxtA_ | Alignment | not modelled | 6.1 | 13 | PDB header: de novo protein Chain: A: PDB Molecule: coiled-coil trimer with glu:trp:lys triad; PDBTitle: coiled-coil trimer with glu:trp:lys triad |
| 76 | d1h6gb1 | Alignment | not modelled | 6.0 | 15 | Fold: Four-helical up-and-down bundle Superfamily: alpha-catenin/vinculin-like Family: alpha-catenin/vinculin |
| 77 | c2of5K_ | Alignment | not modelled | 6.0 | 9 | PDB header: apoptosis Chain: K: PDB Molecule: leucine-rich repeat and death domain-containing protein; PDBTitle: oligomeric death domain complex |
| 78 | c1zv8L_ | Alignment | not modelled | 6.0 | 13 | PDB header: viral protein Chain: I: PDB Molecule: e2 glycoprotein; PDBTitle: a structure-based mechanism of sars virus membrane fusion |
| 79 | c2c6rA_ | Alignment | not modelled | 5.9 | 13 | PDB header: dna-binding protein Chain: A: PDB Molecule: dna-binding stress response protein, dps family; PDBTitle: fe-soaked crystal structure of the dps92 from deinococcus2 radiodurans |
| 80 | c6cv0C_ | Alignment | not modelled | 5.8 | 6 | PDB header: viral protein Chain: C: PDB Molecule: spike glycoprotein; PDBTitle: cryo-electron microscopy structure of infectious bronchitis2 coronavirus spike protein |

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|----|-------------------------|-----------|--------------|-----|----|--|
| 81 | d1hy5a_ | Alignment | not modelled | 5.8 | 20 | Fold: Four-helical up-and-down bundle Superfamily: Bacterial GAP domain Family: Bacterial GAP domain |
| 82 | c4o6xA_ | Alignment | not modelled | 5.6 | 11 | PDB header: protein binding Chain: A: PDB Molecule: ankyrin-3; PDBTitle: crystal structure of human ankyrin g death domain |
| 83 | c4zrjB_ | Alignment | not modelled | 5.6 | 13 | PDB header: signaling protein Chain: B: PDB Molecule: merlin; PDBTitle: structure of merlin-ferm and ctd |
| 84 | c2ieqC_ | Alignment | not modelled | 5.5 | 11 | PDB header: viral protein Chain: C: PDB Molecule: spike glycoprotein; PDBTitle: core structure of s2 from the human coronavirus n163 spike2 glycoprotein |
| 85 | c2kbbA_ | Alignment | not modelled | 5.4 | 14 | PDB header: structural protein Chain: A: PDB Molecule: tal1n-1; PDBTitle: nmr structure of the talin rod domain, 1655-1822 |
| 86 | c4modB_ | Alignment | not modelled | 5.4 | 11 | PDB header: viral protein Chain: B: PDB Molecule: hr1 of s protein, linker, hr2 of s protein; PDBTitle: structure of the mers-cov fusion core |
| 87 | c2p90B_ | Alignment | not modelled | 5.1 | 8 | PDB header: structural genomics, unknown function Chain: B: PDB Molecule: hypothetical protein cgl1923; PDBTitle: the crystal structure of a protein of unknown function from2 corynebacterium glutamicum atcc 13032 |