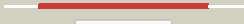



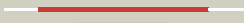
















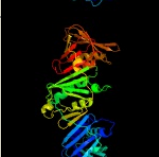








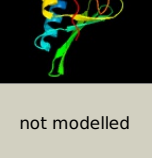


Phyre2

Email	mdejesus@rockefeller.edu
Description	RVBD0002_(dnaN)_2052_3260
Date	Tue Jul 23 14:50:02 BST 2019
Unique Job ID	66cf7f8c47fced81

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c3p16A_	Alignment 		100.0	100	PDB header: transferase Chain: A: PDB Molecule: dna polymerase iii subunit beta; PDBTitle: crystal structure of dna polymerase iii sliding clamp
2	c6e8eA_	Alignment 		100.0	30	PDB header: dna binding protein Chain: A: PDB Molecule: beta sliding clamp,dna mismatch repair protein mutl; PDBTitle: crystal structure of the escherichia coli sliding clamp-mutl complex.
3	c6p81A_	Alignment 		100.0	29	PDB header: transferase/antibiotic Chain: A: PDB Molecule: ubiquitin-like protein smt3,beta sliding clamp; PDBTitle: structure of dna polymerase iii, beta subunit/ beta sliding clamp from2 klebsiella pneumoniae, expressed with an n-terminal his-smt3 fusion3 tag, in complex with griselimycin
4	c1vpkA_	Alignment 		100.0	26	PDB header: transferase Chain: A: PDB Molecule: dna polymerase iii, beta subunit; PDBTitle: crystal structure of dna polymerase iii, beta subunit (tm0262) from2 thermotoga maritima at 2.00 a resolution
5	c1unnA_	Alignment 		100.0	30	PDB header: beta-clamp Chain: A: PDB Molecule: dna polymerase iii beta subunit; PDBTitle: complex of beta-clamp processivity factor and little finger domain of2 poliv
6	c6e8dA_	Alignment 		100.0	28	PDB header: dna binding protein Chain: A: PDB Molecule: beta sliding clamp,dna mismatch repair protein mutl; PDBTitle: crystal structure of the bacillus subtilis sliding clamp-mutl complex.
7	c5w7zA_	Alignment 		100.0	21	PDB header: transferase Chain: A: PDB Molecule: dna polymerase iii subunit beta; PDBTitle: crystal structure of dna polymerase iii subunit beta from rickettsia2 conorii
8	c4tr6A_	Alignment 		100.0	29	PDB header: dna binding protein Chain: A: PDB Molecule: dna polymerase iii subunit beta; PDBTitle: crystal structure of dna polymerase sliding clamp from bacillus2 subtilis
9	c4tszM_	Alignment 		100.0	30	PDB header: transferase Chain: M: PDB Molecule: dna polymerase iii subunit beta; PDBTitle: crystal structure of dna polymerase sliding clamp from pseudomonas2 aeruginosa with ligand
10	c2awaB_	Alignment 		100.0	28	PDB header: transferase Chain: B: PDB Molecule: dna polymerase iii, beta chain; PDBTitle: crystal structure of dna polymerase iii, beta chain (ec 2.7.7.7)2 (np_344555.1) from streptococcus pneumoniae tigr4 at 2.50 a3 resolution
11	c6ap4B_	Alignment 		100.0	29	PDB header: transferase Chain: B: PDB Molecule: dna polymerase iii subunit beta; PDBTitle: crystal structure of the dna polymerase iii subunit beta from2 acinetobacter baumannii

12	c4trtB	Alignment		100.0	28	PDB header: transferase Chain: B: PDB Molecule: dna polymerase iii subunit beta; PDBTitle: deinococcus radiodurans dna polymerase iii subunit beta
13	c5wceB	Alignment		100.0	27	PDB header: transferase Chain: B: PDB Molecule: dna polymerase iii subunit beta; PDBTitle: caulobacter crescentus pol iii beta
14	c3t0pB	Alignment		100.0	21	PDB header: transferase Chain: B: PDB Molecule: dna polymerase iii, beta subunit; PDBTitle: crystal structure of a putative dna polymerase iii beta subunit2 (eubrec_0002; ere_29750) from eubacterium rectale atcc 33656 at 2.263 a resolution
15	c4rkiA	Alignment		100.0	16	PDB header: transferase Chain: A: PDB Molecule: dna polymerase iii subunit beta; PDBTitle: crystal structure of sliding beta clamp from helicobacter pylori
16	c6dj8B	Alignment		100.0	16	PDB header: dna binding protein Chain: B: PDB Molecule: beta sliding clamp; PDBTitle: structure of dna polymerase iii subunit beta from borrelia burgdorferi2 in complex with a natural product
17	c6degA	Alignment		100.0	27	PDB header: dna binding protein Chain: A: PDB Molecule: beta sliding clamp; PDBTitle: crystal structure of a dna polymerase iii subunit beta dnan sliding2 clamp from bartonella birtlesii ll-wm9
18	c1rwzA	Alignment		100.0	20	PDB header: replication Chain: A: PDB Molecule: dna polymerase sliding clamp; PDBTitle: crystal structure of proliferating cell nuclear antigen (pcna) from a.2 fulgidus
19	d1vpka3	Alignment		100.0	30	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase III, beta subunit
20	d1ok7a3	Alignment		100.0	28	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase III, beta subunit
21	c3hi8C	Alignment	not modelled	100.0	19	PDB header: replication Chain: C: PDB Molecule: proliferating cell nuclear antigen pcna; PDBTitle: crystal structure of proliferating cell nuclear antigen (pcna) from2 haloferax volcanii
22	c2ix2B	Alignment	not modelled	100.0	14	PDB header: replication Chain: B: PDB Molecule: dna polymerase sliding clamp c; PDBTitle: crystal structure of the heterotrimeric pcna from2 sulfobolus solfataricus
23	c5cfkB	Alignment	not modelled	100.0	17	PDB header: dna binding protein Chain: B: PDB Molecule: proliferating cell nuclear antigen,proliferating cell PDBTitle: crystal structure of proliferating cell nuclear antigen from2 leishmania donovani at 3.2 a resolution
24	c3p91A	Alignment	not modelled	100.0	13	PDB header: dna binding protein Chain: A: PDB Molecule: proliferating cell nuclear antigen; PDBTitle: crystal structure of proliferating cellular nuclear antigen from2 entamoeba histolytica
25	c6aigA	Alignment	not modelled	100.0	21	PDB header: replication Chain: A: PDB Molecule: dna polymerase sliding clamp 1; PDBTitle: crystal structure of pcna1 from aeropyrum pernix
26	c2zvwH	Alignment	not modelled	100.0	14	PDB header: dna binding protein Chain: H: PDB Molecule: proliferating cell nuclear antigen 2; PDBTitle: crystal structure of proliferating cell nuclear antigen 22 and short peptide from human p21
27	c5tupB	Alignment	not modelled	100.0	21	PDB header: dna binding protein Chain: B: PDB Molecule: proliferating cell nuclear antigen; PDBTitle: x-ray crystal structure of the aspergillus fumigatus sliding clamp
28	c3aizD	Alignment	not modelled	100.0	15	PDB header: replication Chain: D: PDB Molecule: dna polymerase sliding clamp c; PDBTitle: crystal structure of pcna2-pcna3 complex from sulfobolus tokodaii2 (p21212)

29	c1ge8A	Alignment	not modelled	100.0	22	PDB header: dna binding protein Chain: A: PDB Molecule: proliferating cell nuclear antigen; PDBTitle: proliferating cell nuclear antigen (pcna) homolog from2 pyrococcus furiosus
30	c2zvkc	Alignment	not modelled	100.0	18	PDB header: transferase Chain: C: PDB Molecule: proliferating cell nuclear antigen; PDBTitle: crystal structure of pcna in complex with dna polymerase eta fragment
31	d1vpka1	Alignment	not modelled	100.0	24	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase III, beta subunit
32	d1ok7a1	Alignment	not modelled	100.0	34	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase III, beta subunit
33	c3lx2A	Alignment	not modelled	99.9	20	PDB header: dna binding protein Chain: A: PDB Molecule: dna polymerase sliding clamp 2; PDBTitle: crystal structure analysis of pcna from thermococcus kodakaraensis2 tk0582
34	d1vpka2	Alignment	not modelled	99.9	26	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase III, beta subunit
35	c2ijxA	Alignment	not modelled	99.9	20	PDB header: dna binding protein Chain: A: PDB Molecule: dna polymerase sliding clamp a; PDBTitle: crystal structure of pcna3 monomer from sulfolobus solfataricus.
36	d1ok7a2	Alignment	not modelled	99.9	26	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase III, beta subunit
37	c2od8A	Alignment	not modelled	99.9	16	PDB header: protein binding Chain: A: PDB Molecule: proliferating cell nuclear antigen; PDBTitle: structure of a peptide derived from cdc9 bound to pcna
38	c4hk1A	Alignment	not modelled	99.9	21	PDB header: cell cycle Chain: A: PDB Molecule: proliferating cell nuclear antigen; PDBTitle: crystal structure of pcna from drosophila melanogaster
39	c3k4xA	Alignment	not modelled	99.8	15	PDB header: dna binding protein/dna Chain: A: PDB Molecule: proliferating cell nuclear antigen; PDBTitle: eukaryotic sliding clamp pcna bound to dna
40	c1ud9C	Alignment	not modelled	99.8	21	PDB header: dna binding protein Chain: C: PDB Molecule: dna polymerase sliding clamp a; PDBTitle: crystal structure of proliferating cell nuclear antigen (pcna) homolog2 from sulfolobus tokodaii
41	c3aizB	Alignment	not modelled	99.5	14	PDB header: replication Chain: B: PDB Molecule: dna polymerase sliding clamp b; PDBTitle: crystal structure of pcna2-pcna3 complex from sulfolobus tokodaii2 (p21212)
42	c3g65A	Alignment	not modelled	99.4	17	PDB header: cell cycle Chain: A: PDB Molecule: cell cycle checkpoint control protein rad9a; PDBTitle: crystal structure of the human rad9-rad1-hus1 dna damage checkpoint2 complex
43	c1sxjF	Alignment	not modelled	99.4	15	PDB header: replication Chain: F: PDB Molecule: proliferating cell nuclear antigen; PDBTitle: crystal structure of the eukaryotic clamp loader (replication factor2 c, rfc) bound to the dna sliding clamp (proliferating cell nuclear3 antigen, pcna)
44	c2ix2A	Alignment	not modelled	98.8	14	PDB header: replication Chain: A: PDB Molecule: dna polymerase sliding clamp b; PDBTitle: crystal structure of the heterotrimeric pcna from2 sulfolobus solfataricus
45	c3ggrA	Alignment	not modelled	98.7	14	PDB header: cell cycle Chain: A: PDB Molecule: cell cycle checkpoint control protein rad9a; PDBTitle: crystal structure of the human rad9-hus1-rad1 complex
46	d1u7ba2	Alignment	not modelled	98.4	23	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase processivity factor
47	c3g65B	Alignment	not modelled	98.4	12	PDB header: cell cycle Chain: B: PDB Molecule: cell cycle checkpoint protein rad1; PDBTitle: crystal structure of the human rad9-rad1-hus1 dna damage checkpoint2 complex
48	d1iz5a2	Alignment	not modelled	98.3	22	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase processivity factor
49	d1plqa2	Alignment	not modelled	98.3	19	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase processivity factor
50	d1rwza2	Alignment	not modelled	98.1	23	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase processivity factor
51	d1ud9a2	Alignment	not modelled	97.8	26	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase processivity factor
52	d1rwza1	Alignment	not modelled	97.7	15	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase processivity factor
53	d1iz5a1	Alignment	not modelled	97.6	18	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase processivity factor
54	c3l0wA	Alignment	not modelled	97.4	12	PDB header: replication Chain: A: PDB Molecule: proliferating cell nuclear antigen; PDBTitle: structure of split monoubiquitinated pcna with ubiquitin in position2 two
						Fold: DNA clamp

55	d1ud9a1	Alignment	not modelled	96.4	16	Superfamily: DNA clamp Family: DNA polymerase processivity factor
56	d1plqa1	Alignment	not modelled	95.4	19	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase processivity factor
57	d1u7ba1	Alignment	not modelled	95.3	14	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase processivity factor
58	c3pgeA	Alignment	not modelled	93.9	25	PDB header: dna binding protein Chain: A: PDB Molecule: sumo-modified proliferating cell nuclear antigen; PDBTitle: structure of sumoylated pcna
59	c1b8hA	Alignment	not modelled	93.6	13	PDB header: transferase Chain: A: PDB Molecule: dna polymerase processivity component; PDBTitle: sliding clamp, dna polymerase
60	c3l0xB	Alignment	not modelled	91.9	24	PDB header: replication Chain: B: PDB Molecule: proliferating cell nuclear antigen; PDBTitle: structure of split yeast pcna
61	d1czda1	Alignment	not modelled	71.5	16	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase processivity factor
62	d1b77a1	Alignment	not modelled	52.3	12	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase processivity factor
63	c2obkE	Alignment	not modelled	51.7	22	PDB header: structural genomics, unknown function Chain: E: PDB Molecule: sel/selw/selh selenoprotein domain; PDBTitle: x-ray structure of the putative se binding protein from pseudomonas2 fluorescens. northeast structural genomics consortium target plr6.
64	c2p0gB	Alignment	not modelled	48.7	19	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: selenoprotein w-related protein; PDBTitle: crystal structure of selenoprotein w-related protein from vibrio2 cholerae. northeast structural genomics target vcr75
65	d2fa8a1	Alignment	not modelled	47.8	25	Fold: Thioredoxin fold Superfamily: Thioredoxin-like Family: Selenoprotein W-related
66	c2ljka	Alignment	not modelled	40.8	19	PDB header: signaling protein Chain: A: PDB Molecule: protein c17orf37; PDBTitle: solution structure of the oncogenic-potential mien1 protein
67	c3ggrB	Alignment	not modelled	39.1	11	PDB header: cell cycle Chain: B: PDB Molecule: checkpoint protein hus1; PDBTitle: crystal structure of the human rad9-hus1-rad1 complex
68	c2ojlB	Alignment	not modelled	38.0	25	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: hypothetical protein; PDBTitle: crystal structure of q7waf1_borpa from bordetella parapertussis.2 northeast structural genomics target bpr68.
69	c2npbA	Alignment	not modelled	32.2	8	PDB header: oxidoreductase Chain: A: PDB Molecule: selenoprotein w; PDBTitle: nmr solution structure of mouse selw
70	d1aoza2	Alignment	not modelled	22.9	11	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Multidomain cupredoxins
71	d2q9oa2	Alignment	not modelled	22.7	12	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Multidomain cupredoxins
72	c3u0iA	Alignment	not modelled	18.9	14	PDB header: unknown function Chain: A: PDB Molecule: probable fad-binding, putative uncharacterized protein; PDBTitle: crystal structure of a probable fad-binding, putative uncharacterized2 protein from brucella melitensis
73	d1v10a2	Alignment	not modelled	15.9	14	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Multidomain cupredoxins
74	d1kyaa2	Alignment	not modelled	15.8	13	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Multidomain cupredoxins
75	c3dexA	Alignment	not modelled	14.0	16	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: sav_2001; PDBTitle: crystal structure of sav_2001 protein from streptomyces2 avermitilis, northeast structural genomics consortium3 target svr107.
76	c3s0tB	Alignment	not modelled	13.7	27	PDB header: cell adhesion Chain: B: PDB Molecule: cfa/iii pilin; PDBTitle: crystal structure of the cofa type iv pilin subunit from2 enterotoxigenic e. coli
77	d1p5dx4	Alignment	not modelled	12.0	8	Fold: TBP-like Superfamily: Phosphoglucosyltransferase, C-terminal domain Family: Phosphoglucosyltransferase, C-terminal domain
78	c5uebA	Alignment	not modelled	10.9	21	PDB header: unknown function Chain: A: PDB Molecule: negoa.19184.a; PDBTitle: novel crystal structure of a hypothetical protein from neisseria2 gonorrhoeae
79	d2qdy1	Alignment	not modelled	10.8	21	Fold: Nitrile hydratase alpha chain Superfamily: Nitrile hydratase alpha chain Family: Nitrile hydratase alpha chain
80	c3qyhG	Alignment	not modelled	10.6	24	PDB header: lyase Chain: G: PDB Molecule: co-type nitrile hydratase alpha subunit; PDBTitle: crystal structure of co-type nitrile hydratase beta-h711 from2 pseudomonas putida.
81	c6dfdB	Alignment	not modelled	10.1	7	PDB header: metal transport Chain: B: PDB Molecule: metal transporter cnm3;

81	c0ur6B_	Alignment	not modelled	10.1	7	PDBTitle: crystal structure of cnm3 cyclic nucleotide-binding homology domain PDB header: hydrolase
82	c2dxbR_	Alignment	not modelled	9.6	35	Chain: R: PDB Molecule: thiocyanate hydrolase subunit gamma; PDBTitle: recombinant thiocyanate hydrolase comprising partially-modified cobalt2 centers
83	d1hfua2_	Alignment	not modelled	9.5	8	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Multidomain cupredoxins
84	c3l0wB_	Alignment	not modelled	9.4	29	PDB header: replication Chain: B: PDB Molecule: monoubiquitinated proliferating cell nuclear antigen; PDBTitle: structure of split monoubiquitinated pcna with ubiquitin in position2 two
85	d1v29a_	Alignment	not modelled	8.0	24	Fold: Nitrile hydratase alpha chain Superfamily: Nitrile hydratase alpha chain Family: Nitrile hydratase alpha chain
86	d1gyca2_	Alignment	not modelled	7.6	8	Fold: Cupredoxin-like Superfamily: Cupredoxins Family: Multidomain cupredoxins
87	d1vqoe2_	Alignment	not modelled	7.1	24	Fold: Ribosomal protein L6 Superfamily: Ribosomal protein L6 Family: Ribosomal protein L6
88	c4fm4C_	Alignment	not modelled	7.1	29	PDB header: lyase Chain: C: PDB Molecule: nitrile hydratase alpha subunit; PDBTitle: wild type fe-type nitrile hydratase from comamonas testosteroni n1
89	d1p42a1_	Alignment	not modelled	6.6	19	Fold: Ribosomal protein S5 domain 2-like Superfamily: Ribosomal protein S5 domain 2-like Family: UDP-3-O-[3-hydroxymyristoyl] N-acetylglucosamine deacetylase LpxC
90	d1ugpa_	Alignment	not modelled	6.5	24	Fold: Nitrile hydratase alpha chain Superfamily: Nitrile hydratase alpha chain Family: Nitrile hydratase alpha chain
91	d2dkya1_	Alignment	not modelled	5.9	15	Fold: SAM domain-like Superfamily: SAM/Pointed domain Family: Variant SAM domain
92	c2lezA_	Alignment	not modelled	5.5	15	PDB header: signaling protein Chain: A: PDB Molecule: secreted effector protein pipb2; PDBTitle: solution nmr structure of n-terminal domain of salmonella effector2 protein pipb2. northeast structural genomics consortium (nesg) target3 stt318a
93	d1d6za4_	Alignment	not modelled	5.4	9	Fold: N domain of copper amine oxidase-like Superfamily: Copper amine oxidase, domain N Family: Copper amine oxidase, domain N
94	c6amxA_	Alignment	not modelled	5.3	19	PDB header: transport protein Chain: A: PDB Molecule: abc transporter; PDBTitle: crystal structure of nucelotide binding domain of o-antigen2 polysaccharide abc-transporter