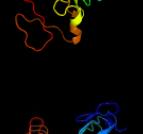
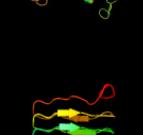
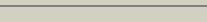
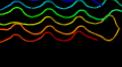
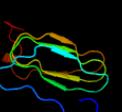


Phyre²

Email	mdejesus@rockefeller.edu
Description	RVBD2487c_(PE_PGRS42)_2795311_2797395
Date	Wed Aug 7 12:50:11 BST 2019
Unique Job ID	940e39c96dbe6cdd

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c5xfsA_			99.8	46	PDB header: protein transport Chain: A: PDB Molecule: pe family protein pe8; PDBTitle: crystal structure of pe8-pe15 in complex with esp95 from m.2 tuberculosis
2	d2g38a1			99.8	34	Fold: Ferritin-like Superfamily: PE/PPE dimer-like Family: PE
3	c2g38A_			99.8	34	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: pe family protein; PDBTitle: a pe/ppe protein complex from mycobacterium tuberculosis
4	c1ygvA_			99.6	44	PDB header: structural protein/contractile protein Chain: A: PDB Molecule: collagen i alpha 1; PDBTitle: the structure of collagen type i. single type i collagen2 molecule: rigid refinement
5	c3hqvB_			99.5	26	PDB header: structural protein, contractile protein Chain: B: PDB Molecule: collagen alpha-2(i) chain; PDBTitle: low resolution, molecular envelope structure of type i2 collagen in situ determined by fiber diffraction. single3 type i collagen molecule, rigid body refinement
6	c1y0fB_			99.2	27	PDB header: structural protein/contractile protein Chain: B: PDB Molecule: collagen i alpha 2; PDBTitle: the structure of collagen type i. single type i collagen2 molecule
7	c1k7qA_			98.3	20	PDB header: hydrolase Chain: A: PDB Molecule: secreted protease c; PDBTitle: prtc from erwinia chrysanthemi: e189a mutant
8	c2zj6A_			98.1	16	PDB header: hydrolase Chain: A: PDB Molecule: lipase; PDBTitle: crystal structure of d337a mutant of pseudomonas sp. mis38 lipase
9	c2ml3A_			98.0	25	PDB header: isomerase Chain: A: PDB Molecule: poly(beta-d-mannuronate) c5 epimerase 6; PDBTitle: solution structure of alge6r3 subunit from the azotobacter vinelandii2 mannuronan c5-epimerase
10	c2qubG_			98.0	15	PDB header: hydrolase Chain: G: PDB Molecule: extracellular lipase; PDBTitle: crystal structure of extracellular lipase lipa from serratia2 marcescens
11	d1kapp1			98.0	19	Fold: Single-stranded right-handed beta-helix Superfamily: beta-Roll Family: Serralysin-like metalloprotease, C-terminal domain

12	c3bogB	Alignment		98.0	38	PDB header: antifreeze protein Chain: B; PDB Molecule: 6.5 kda glycine-rich antifreeze protein; PDBTitle: snow flea antifreeze protein quasi-racemate
13	c3bogA	Alignment		98.0	38	PDB header: antifreeze protein Chain: A; PDB Molecule: 6.5 kda glycine-rich antifreeze protein; PDBTitle: snow flea antifreeze protein quasi-racemate
14	c2ml2A	Alignment		97.9	21	PDB header: isomerase Chain: A; PDB Molecule: poly(beta-d-mannuronate) c5 epimerase 6; PDBTitle: solution structure of alge6r2 subunit from the azotobacter vinelandii2 mannuronan c5-epimerase
15	c1satA	Alignment		97.9	19	PDB header: hydrolase (serine protease) Chain: A; PDB Molecule: serratio protease; PDBTitle: crystal structure of the 50 kda metallo protease from s.2 marcescens
16	c2pneA	Alignment		97.9	35	PDB header: antifreeze protein Chain: A; PDB Molecule: 6.5 kda glycine-rich antifreeze protein; PDBTitle: crystal structure of the snow flea antifreeze protein
17	c3boiB	Alignment		97.9	35	PDB header: antifreeze protein Chain: B; PDB Molecule: 6.5 kda glycine-rich antifreeze protein; PDBTitle: snow flea antifreeze protein racemate
18	c3boiA	Alignment		97.9	35	PDB header: antifreeze protein Chain: A; PDB Molecule: 6.5 kda glycine-rich antifreeze protein; PDBTitle: snow flea antifreeze protein racemate
19	d1k7ia1	Alignment		97.7	18	Fold: Single-stranded right-handed beta-helix Superfamily: beta-Roll Family: Serralysin-like metalloprotease, C-terminal domain
20	c2agmA	Alignment		97.6	26	PDB header: isomerase Chain: A; PDB Molecule: poly(beta-d-mannuronate) c5 epimerase 4; PDBTitle: solution structure of the r-module from alge4
21	c1jiwP	Alignment	not modelled	97.4	23	PDB header: hydrolase/hydrolase inhibitor Chain: P; PDB Molecule: alkaline metalloproteinase; PDBTitle: crystal structure of the apr-aprin complex
22	clom8A	Alignment	not modelled	97.3	21	PDB header: hydrolase Chain: A; PDB Molecule: serralysin; PDBTitle: crystal structure of a cold adapted alkaline protease from pseudomonas2 tac ii 18, co-crystallized with 10 mm edta
23	d1sata1	Alignment	not modelled	97.0	19	Fold: Single-stranded right-handed beta-helix Superfamily: beta-Roll Family: Serralysin-like metalloprotease, C-terminal domain
24	d1g9ka1	Alignment	not modelled	96.9	18	Fold: Single-stranded right-handed beta-helix Superfamily: beta-Roll Family: Serralysin-like metalloprotease, C-terminal domain
25	c1nayC	Alignment	not modelled	96.7	28	PDB header: structural protein Chain: C; PDB Molecule: collagen-like peptide; PDBTitle: gpp-foldon:x-ray structure
26	c5cxIA	Alignment	not modelled	96.6	30	PDB header: toxin Chain: A; PDB Molecule: bifunctional hemolysin/adenylate cyclase; PDBTitle: crystal structure of the rtx domain block v of adenylate cyclase toxin2 from bordetella pertussis
27	c5ctdB	Alignment	not modelled	96.3	35	PDB header: structural protein Chain: B; PDB Molecule: collagen alpha-2(i) chain, collagen alpha-2(ix) chain; PDBTitle: crystal structure of the type ix collagen nc2 heterotrimerization2 domain with a guest fragment a2a1a1 of type i collagen
28	c5ctIC	Alignment	not modelled	96.3	34	PDB header: structural protein Chain: C; PDB Molecule: collagen alpha-1(i) chain, collagen alpha-3(ix) chain; PDBTitle: crystal structure of the type ix collagen nc2 hetero-

						trimerization2 domain with a guest fragment a2a1a1 of type i collagen (native form)
29	c5ctdA	Alignment	not modelled	96.2	35	PDB header: structural protein Chain: A: PDB Molecule: collagen alpha-1(i) chain,collagen alpha-1(ix) chain; PDBTitle: crystal structure of the type ix collagen nc2 heterotrimerization2 domain with a guest fragment a2a1a1 of type i collagen
30	c3p4gD	Alignment	not modelled	94.2	20	PDB header: antifreeze protein Chain: D: PDB Molecule: antifreeze protein; PDBTitle: x-ray crystal structure of a hyperactive, ca2+-dependent, beta-helical2 antifreeze protein from an antarctic bacterium
31	c2klwA	Alignment	not modelled	84.0	31	PDB header: de novo protein Chain: A: PDB Molecule: (pkg)10; PDBTitle: solution structure of an abc collagen heterotrimer reveals a2 single-register helix stabilized by electrostatic3 interactions
32	c2cuoC	Alignment	not modelled	81.8	41	PDB header: structural protein Chain: C: PDB Molecule: collagen model peptide (pro-pro-gly)9; PDBTitle: collagen model peptide (pro-pro-gly)9
33	c2cuoF	Alignment	not modelled	81.8	41	PDB header: structural protein Chain: F: PDB Molecule: collagen model peptide (pro-pro-gly)9; PDBTitle: collagen model peptide (pro-pro-gly)9
34	c1k6fA	Alignment	not modelled	77.6	39	PDB header: structural protein Chain: A: PDB Molecule: collagen triple helix; PDBTitle: crystal structure of the collagen triple helix model [(pro-pro-gly)2 10]3
35	c1k6fD	Alignment	not modelled	77.6	39	PDB header: structural protein Chain: D: PDB Molecule: collagen triple helix; PDBTitle: crystal structure of the collagen triple helix model [(pro-pro-gly)2 10]3
36	c1k6fE	Alignment	not modelled	77.6	39	PDB header: structural protein Chain: E: PDB Molecule: collagen triple helix; PDBTitle: crystal structure of the collagen triple helix model [(pro-pro-gly)2 10]3
37	c1k6fB	Alignment	not modelled	77.6	39	PDB header: structural protein Chain: B: PDB Molecule: collagen triple helix; PDBTitle: crystal structure of the collagen triple helix model [(pro-pro-gly)2 10]3
38	c1k6fC	Alignment	not modelled	77.6	39	PDB header: structural protein Chain: C: PDB Molecule: collagen triple helix; PDBTitle: crystal structure of the collagen triple helix model [(pro-pro-gly)2 10]3
39	c1k6fF	Alignment	not modelled	77.6	39	PDB header: structural protein Chain: F: PDB Molecule: collagen triple helix; PDBTitle: crystal structure of the collagen triple helix model [(pro-pro-gly)2 10]3
40	c3ah9F	Alignment	not modelled	75.3	42	PDB header: structural protein Chain: F: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of (pro-pro-gly)9 at 1.1 a resolution
41	c3ah9D	Alignment	not modelled	73.0	45	PDB header: structural protein Chain: D: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of (pro-pro-gly)9 at 1.1 a resolution
42	c3ah9A	Alignment	not modelled	72.2	43	PDB header: structural protein Chain: A: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of (pro-pro-gly)9 at 1.1 a resolution
43	c3ah9C	Alignment	not modelled	72.1	42	PDB header: structural protein Chain: C: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of (pro-pro-gly)9 at 1.1 a resolution
44	c3ah9B	Alignment	not modelled	72.1	42	PDB header: structural protein Chain: B: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of (pro-pro-gly)9 at 1.1 a resolution
45	c3ah9E	Alignment	not modelled	72.1	42	PDB header: structural protein Chain: E: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of (pro-pro-gly)9 at 1.1 a resolution
46	c2cuoE	Alignment	not modelled	63.9	38	PDB header: structural protein Chain: E: PDB Molecule: collagen model peptide (pro-pro-gly)9; PDBTitle: collagen model peptide (pro-pro-gly)9
47	c2cuoB	Alignment	not modelled	63.9	38	PDB header: structural protein Chain: B: PDB Molecule: collagen model peptide (pro-pro-gly)9; PDBTitle: collagen model peptide (pro-pro-gly)9
48	c2cuoD	Alignment	not modelled	63.9	38	PDB header: structural protein Chain: D: PDB Molecule: collagen model peptide (pro-pro-gly)9; PDBTitle: collagen model peptide (pro-pro-gly)9
49	c2cuoA	Alignment	not modelled	63.9	38	PDB header: structural protein Chain: A: PDB Molecule: collagen model peptide (pro-pro-gly)9; PDBTitle: collagen model peptide (pro-pro-gly)9
50	c3a0mF	Alignment	not modelled	54.1	38	PDB header: structural protein Chain: F: PDB Molecule: collagen-like peptide; PDBTitle: structure of (ppg)4-ovg-(ppg)4, monoclinic, twinned crystal
51	c5juhA	Alignment	not modelled	46.6	30	PDB header: cell adhesion Chain: A: PDB Molecule: antifreeze protein; PDBTitle: crystal structure of c-terminal domain (rv) of mpafp
52	c3abnA	Alignment	not modelled	40.5	38	PDB header: structural protein Chain: A: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of (pro-pro-gly)4 at 1.022 a
53	c4qlqA	Alignment	not modelled	39.9	18	PDB header: cell adhesion Chain: A: PDB Molecule: adhesin/invasin tiba autotransporter; PDBTitle: crystal structure of tibc-catalyzed hyper-glycosylated tiba55-3502 fragment
54	c3abnC	Alignment	not modelled	25.6	39	PDB header: structural protein Chain: C: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of (pro-pro-gly)4-hyp-asp-gly-(pro-pro-

						gly)4 at 1.022 a
55	c1x1kD_	Alignment	not modelled	22.2	42	PDB header: structural protein Chain: D: PDB Molecule: host-guest peptide (pro-pro-gly)4-(pro-allohyp- PDBTitle: host-guest peptide (pro-pro-gly)4-(pro-allohyp-gly)-(pro-2 pro-gly)4
56	c1x1kA_	Alignment	not modelled	22.2	42	PDB header: structural protein Chain: A: PDB Molecule: host-guest peptide (pro-pro-gly)4-(pro-allohyp- PDBTitle: host-guest peptide (pro-pro-gly)4-(pro-allohyp-gly)-(pro-2 pro-gly)4
57	c2d3fE_	Alignment	not modelled	22.2	42	PDB header: structural protein Chain: E: PDB Molecule: collagen model peptides (pro-pro-gly)4-pro-hyp- PDBTitle: crystal structures of collagen model peptides (pro-pro-gly)2 4-pro-hyp-gly-(pro-pro-gly)4
58	c1x1kB_	Alignment	not modelled	22.2	42	PDB header: structural protein Chain: B: PDB Molecule: host-guest peptide (pro-pro-gly)4-(pro-allohyp- PDBTitle: host-guest peptide (pro-pro-gly)4-(pro-allohyp-gly)-(pro-2 pro-gly)4
59	c2d3fF_	Alignment	not modelled	22.2	42	PDB header: structural protein Chain: F: PDB Molecule: collagen model peptides (pro-pro-gly)4-pro-hyp- PDBTitle: crystal structures of collagen model peptides (pro-pro-gly)2 4-pro-hyp-gly-(pro-pro-gly)4
60	c1x1kC_	Alignment	not modelled	22.2	42	PDB header: structural protein Chain: C: PDB Molecule: host-guest peptide (pro-pro-gly)4-(pro-allohyp- PDBTitle: host-guest peptide (pro-pro-gly)4-(pro-allohyp-gly)-(pro-2 pro-gly)4
61	c2d3fD_	Alignment	not modelled	22.2	42	PDB header: structural protein Chain: D: PDB Molecule: collagen model peptides (pro-pro-gly)4-pro-hyp- PDBTitle: crystal structures of collagen model peptides (pro-pro-gly)2 4-pro-hyp-gly-(pro-pro-gly)4
62	c3admC_	Alignment	not modelled	19.9	44	PDB header: structural protein Chain: C: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of (pro-pro-gly)4-hyp-ser-gly-(pro-pro-gly)4
63	c3a0mC_	Alignment	not modelled	17.8	42	PDB header: structural protein Chain: C: PDB Molecule: collagen-like peptide; PDBTitle: structure of (ppg)4-ovg-(ppg)4, monoclinic, twinned crystal
64	c3admB_	Alignment	not modelled	17.2	42	PDB header: structural protein Chain: B: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of (pro-pro-gly)4-hyp-ser-gly-(pro-pro-gly)4
65	c3admE_	Alignment	not modelled	17.2	42	PDB header: structural protein Chain: E: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of (pro-pro-gly)4-hyp-ser-gly-(pro-pro-gly)4
66	c3admA_	Alignment	not modelled	17.2	42	PDB header: structural protein Chain: A: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of (pro-pro-gly)4-hyp-ser-gly-(pro-pro-gly)4
67	c3admF_	Alignment	not modelled	17.2	42	PDB header: structural protein Chain: F: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of (pro-pro-gly)4-hyp-ser-gly-(pro-pro-gly)4
68	c3abnB_	Alignment	not modelled	16.4	38	PDB header: structural protein Chain: B: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure of (pro-pro-gly)4-hyp-asp-gly-(pro-pro-gly)4 at 1.022 a
69	c3a08D_	Alignment	not modelled	13.8	43	PDB header: structural protein Chain: D: PDB Molecule: collagen-like peptide; PDBTitle: structure of (ppg)4-oog-(ppg)4, monoclinic, twinned crystal
70	c3a19F_	Alignment	not modelled	13.8	43	PDB header: structural protein Chain: F: PDB Molecule: collagen-like peptide; PDBTitle: structure of (ppg)4-oog-(ppg)4_h monoclinic, twinned crystal
71	c2d3hD_	Alignment	not modelled	13.8	43	PDB header: structural protein Chain: D: PDB Molecule: collagen model peptides (pro-pro-gly)4-hyp-hyp- PDBTitle: crystal structures of collagen model peptides (pro-pro-gly)2 4-hyp-hyp-gly-(pro-pro-gly)4
72	c3a0aC_	Alignment	not modelled	12.8	43	PDB header: structural protein Chain: C: PDB Molecule: collagen-like peptide; PDBTitle: structure of (ppg)4-ogg-(ppg)4, monoclinic, twinned crystal
73	c3a1hF_	Alignment	not modelled	12.5	43	PDB header: structural protein Chain: F: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure analysis of the collagen-like peptide, (ppg)4-otg-2 (ppg)4
74	c3a0aE_	Alignment	not modelled	12.5	50	PDB header: structural protein Chain: E: PDB Molecule: collagen-like peptide; PDBTitle: structure of (ppg)4-ogg-(ppg)4, monoclinic, twinned crystal
75	c3a19D_	Alignment	not modelled	12.3	42	PDB header: structural protein Chain: D: PDB Molecule: collagen-like peptide; PDBTitle: structure of (ppg)4-oog-(ppg)4_h monoclinic, twinned crystal
76	c3a0aD_	Alignment	not modelled	11.5	45	PDB header: structural protein Chain: D: PDB Molecule: collagen-like peptide; PDBTitle: structure of (ppg)4-ogg-(ppg)4, monoclinic, twinned crystal
77	d1gr0a1	Alignment	not modelled	11.4	38	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Glyceraldehyde-3-phosphate dehydrogenase-like, N-terminal domain
78	c3a0aB_	Alignment	not modelled	11.3	48	PDB header: structural protein Chain: B: PDB Molecule: collagen-like peptide;

78	c3avav_	Alignment	not modelled	11.2	48	PDBTitle: structure of (ppg)4-ovg-(ppg)4, monoclinic, twinned crystal PDB header: structural protein Chain: A: PDB Molecule: collagen-like peptide; PDBTitle: structure of (ppg)4-ovg-(ppg)4, monoclinic, twinned crystal
79	c3a0aA_	Alignment	not modelled	9.8	50	PDB header: structural protein Chain: A: PDB Molecule: collagen-like peptide; PDBTitle: structure of (ppg)4-ovg-(ppg)4, monoclinic, twinned crystal
80	c3a1hA_	Alignment	not modelled	8.5	50	PDB header: structural protein Chain: B: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure analysis of the collagen-like peptide, (ppg)4-otg-2 (ppg)4
81	c3a1hD_	Alignment	not modelled	7.2	50	PDB header: structural protein Chain: D: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure analysis of the collagen-like peptide, (ppg)4-otg-2 (ppg)4
82	c3a1hE_	Alignment	not modelled	7.2	50	PDB header: structural protein Chain: E: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure analysis of the collagen-like peptide, (ppg)4-otg-2 (ppg)4
83	c3a1hC_	Alignment	not modelled	7.2	50	PDB header: structural protein Chain: C: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure analysis of the collagen-like peptide, (ppg)4-otg-2 (ppg)4
84	c2d3fC_	Alignment	not modelled	6.7	40	PDB header: structural protein Chain: C: PDB Molecule: collagen model peptides (pro-pro-gly)4-pro-hyp- PDBTitle: crystal structures of collagen model peptides (pro-pro-gly)2 4-pro-hyp-gly-(pro-pro-gly)4
85	c2d3fB_	Alignment	not modelled	6.7	40	PDB header: structural protein Chain: B: PDB Molecule: collagen model peptides (pro-pro-gly)4-pro-hyp- PDBTitle: crystal structures of collagen model peptides (pro-pro-gly)2 4-pro-hyp-gly-(pro-pro-gly)4
86	c1x1kE_	Alignment	not modelled	6.7	40	PDB header: structural protein Chain: E: PDB Molecule: host-guest peptide (pro-pro-gly)4-(pro-allohyp- PDBTitle: host-guest peptide (pro-pro-gly)4-(pro-allohyp-gly)-(pro-2 pro-gly)4
87	c2d3fA_	Alignment	not modelled	6.7	40	PDB header: structural protein Chain: A: PDB Molecule: collagen model peptides (pro-pro-gly)4-pro-hyp- PDBTitle: crystal structures of collagen model peptides (pro-pro-gly)2 4-pro-hyp-gly-(pro-pro-gly)4
88	c3a1hB_	Alignment	not modelled	6.4	45	PDB header: structural protein Chain: B: PDB Molecule: collagen-like peptide; PDBTitle: crystal structure analysis of the collagen-like peptide, (ppg)4-otg-2 (ppg)4
89	c2n8rB_	Alignment	not modelled	6.3	56	PDB header: hydrolase/structural protein Chain: B: PDB Molecule: collagen triple helix repeat family protein; PDBTitle: productive complex between mmp-12 and synthetic triple-helical2 collagen, revealed through paramagnetic nmr
90	c2n8rC_	Alignment	not modelled	6.3	56	PDB header: hydrolase/structural protein Chain: C: PDB Molecule: collagen triple helix repeat family protein; PDBTitle: productive complex between mmp-12 and synthetic triple-helical2 collagen, revealed through paramagnetic nmr
91	c2n8rD_	Alignment	not modelled	6.3	56	PDB header: hydrolase/structural protein Chain: D: PDB Molecule: collagen triple helix repeat family protein; PDBTitle: productive complex between mmp-12 and synthetic triple-helical2 collagen, revealed through paramagnetic nmr
92	c3a08F_	Alignment	not modelled	6.0	43	PDB header: structural protein Chain: F: PDB Molecule: collagen-like peptide; PDBTitle: structure of (ppg)4-oog-(ppg)4, monoclinic, twinned crystal
93	c2d3hF_	Alignment	not modelled	6.0	41	PDB header: structural protein Chain: F: PDB Molecule: collagen model peptides (pro-pro-gly)4-hyp-hyp- PDBTitle: crystal structures of collagen model peptides (pro-pro-gly)2 4-hyp-hyp-gly-(pro-pro-gly)4
94	c3a0mE_	Alignment	not modelled	5.6	45	PDB header: structural protein Chain: E: PDB Molecule: collagen-like peptide; PDBTitle: structure of (ppg)4-ovg-(ppg)4, monoclinic, twinned crystal
95	c3lkxB_	Alignment	not modelled	5.5	28	PDB header: chaperone Chain: B: PDB Molecule: nascent polypeptide-associated complex subunit alpha; PDBTitle: human nac dimerization domain
96	c3a0mB_	Alignment	not modelled	5.5	39	PDB header: structural protein Chain: B: PDB Molecule: collagen-like peptide; PDBTitle: structure of (ppg)4-ovg-(ppg)4, monoclinic, twinned crystal
97	c3a0mD_	Alignment	not modelled	5.4	39	PDB header: structural protein Chain: D: PDB Molecule: collagen-like peptide; PDBTitle: structure of (ppg)4-ovg-(ppg)4, monoclinic, twinned crystal