

# SARS Coronavirus Main Proteinase Complexed With Inhibitor

## SARS Coronavirus , 3CLpro

Expressed in *E.Coli*

Cat. No. CBCRY05

Lot. No. (See product label)

### BACKGROUND

The SARS-CoV main protease, which is a 33.8-kDa protease (also called the 3C-like protease), plays a pivotal role in mediating viral replication and transcription functions through extensive proteolytic processing of two replicase polyproteins, pp1a (486 kDa) and pp1ab (790 kDa).

### MOLECULAR DESCRIPTION

**Protein classification:** Hydrolase

**Structure Weight:** 69623.62

**Polymer:** 1

**Molecule:** 3C-like proteinase

**Chains:** A, B

**Type:** polypeptide (L)

**Chain Length:** 306 amino acids

**Polymer:** 2

**Molecule:** 5-mer peptide of inhibitor

**Chains:** G, H, K

**Type:** polypeptide (L)

**Chain Length:** 5 amino acids

### CRYSTAL INFORMATION

**PDB ID:** [1UK4](#)

**MMDB ID:** [25518](#)

**Source:** E.Coli

**Method:** X-Ray Diffraction

**Resolution:** 2.5 Å

**Ligand Chemical Component:** Chloroacetone

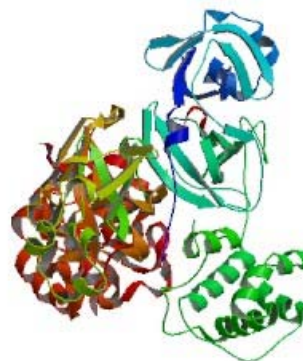
### RELATED PDB ENTRIES

[1UK2](#): the same protein without inhibitor at PH8.0

[1UK3](#): the same protein without inhibitor at PH7.6

### FOR RESEARCH USE ONLY

### CRYSTAL STRUCTURE



### GENE INFORMATION

**Gene Name:** [NEWENTRY](#)

**Synonyms:** 3C-like proteinase

**GeneID:** [2831005](#)

**Function:** RNA binding; catalytic activity; RNA-directed RNA polymerase activity; peptidase activity; cysteine-type peptidase activity; zinc ion binding; hydrolase activity; metal ion binding

### PRIMARY CITATION

Yang H, Yang M, Ding Y, Liu Y, Lou Z, Zhou Z, Sun L, Mo L, Ye S, Pang H, Gao GF, Anand K, Bartlam M, Hilgenfeld R, Rao Z. The crystal structures of severe acute respiratory syndrome virus main protease and its complex with an inhibitor. Proc Natl Acad Sci U S A. 2003 Nov 11;100 (23):13190-13195.

Creative Biostructure. All rights reserved.

45-16 Ramsey Road Shirley, NY 11967, USA  
Tel: 1-866-588-6325 · Fax: 1-631-207-8356  
E-mail: [info@creative-biostructure.com](mailto:info@creative-biostructure.com)  
[www.creative-biostructure.com](http://www.creative-biostructure.com)