SARS-CoV-2 (2019-nCoV) 3CLpro / 3C-like protease-His & AVI Recombinant Protein

Catalog Number: **40594-V56B**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

3CLpro

Protein Construction:

A DNA sequence encoding the SARS-CoV-2 (2019-nCoV) 3CLpro (YP_009725295.1) (Ser3264-Gln3569) was expressed with a N-terminus polyhistide tag and AVI tag at the N-terminus.

Source: 2019-nCoV

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE.

Bio-activity:

Measured by its ability to cleave a peptide substrate, Dabcyl-KTSAVLQSGFRKME-Edans.The specific activity is >3 pmols/min/μg

Endotoxin:

< 1.0 EU per μg protein as determined by the LAL method.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Met

Molecular Mass:

The recombinant heterodimer of SARS-CoV-2 (2019-nCoV) 3CLpro consists of 332 amino acids and has a calculated molecular mass of 37.12 KDa.

Formulation:

Lyophilized from sterile 20mM Tris, 300mM NaCl, 10% glycerol, pH 8.0

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.
Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:

Protein Description

3C-like protease (3CLpro) is the main protease of Humann Coronavirus. 3C-like protease (3CLpro) is a key enzyme, as it cleaves several sites to produce non-structural proteins that are essential for genome replication and Coronavirus virion production, such as an RNA-dependent RNA polymerase, a helicase, ribonucleases and 3CLpro itself, from two types of polyproteins (pp1a and pp1ab). SARS-CoV 3CLpro exists as a homodimer and each protomer has an active site.

References

1. Tomonari Muramatsu,et al.Autoprocessing mechanism of severe acute respiratory syndrome coronavirus 3C-like protease (SARS-CoV 3CLpro) from its polyproteins.FEBS Journal.2013
2. Ziebuhr J,Molecular biology of severe acute respiratory syndrome coronavirus. Curr Opin Microbiol.2004
3. Yang H, et al. The crystal structures of severe acute respiratory syndrome virus main protease and its complex with an inhibitor. Proc Natl Acad Sci USA.2003