

SARS-CoV-2 (2019-nCoV) Plpro / papain-like protease (aa 1564-1880, His Tag)

Catalog Number: 40593-V07E



Sino Biological
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General Information

Gene Name Synonym:

Plpro, papain-like protease

Protein Construction:

A DNA sequence encoding the SARS-CoV-2 (2019-nCoV) papain-like protease (QVD65746.1) (Glu1564-Val1880) was expressed with a polyhistidine tag at the N-terminus.

Source: 2019-nCoV

Expression Host: E. coli

QC Testing

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

Bio-activity:

Measured by its ability to cleave a fluorogenic peptide substrate, Arg-Leu-Arg-Gly-Gly-AMC (RLRGGAMC) (Bachem, Catalog #I-1690). The Specific Activity is > 80pmols/min/μg.

Endotoxin:

Please contact us for more information.

Predicted N terminal: Met

Molecular Mass:

The recombinant SARS-CoV-2 (2019-nCoV) Plpro / papain-like protease (His Tag) consists of 324 amino acids and predicts a molecular mass of 36.79 kDa.

Formulation:

Lyophilized from sterile 20mM Tris 500mM NaCl, pH 7.4.

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

Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

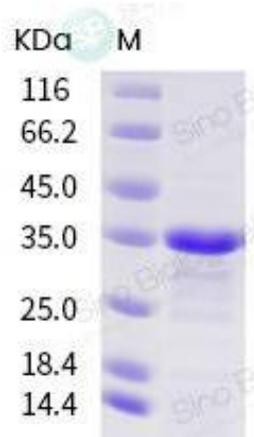
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

The coronavirus proteases, papain-like protease (PLpro) and 3C-like protease (3CLpro), are attractive antiviral drug targets because they are essential for coronavirus replication. PLpro has the additional function of stripping ubiquitin and ISG15 from host-cell proteins to aid coronaviruses in their evasion of the host innate immune responses. Targeting PLpro with antiviral drugs may have an advantage in not only inhibiting viral replication but also inhibiting the dysregulation of signaling cascades in infected cells that may lead to cell death in surrounding, uninfected cells.

References

Yahira M. Báez-Santos. The SARS-coronavirus papain-like protease: Structure, function and inhibition by designed antiviral compounds. Antiviral Research. 2015