9051 Mira Mesa Blvd, #910094
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CoV-2 3CL

Coronavirus 2019 3CL Protease Recombinant
VAG0062

Product Overview

Name	CoV-2 3CL

Description

Coronavirus 2019 3CL Protease Recombinant

Introduction

The SARS CoV-2 3CL protease (C30 Endopeptidase) derived from human SARS-CoV-2 is a C30-type cysteine protease situated in the NS3 segment. SARS CoV-2 3CL protease biological functionality is needed to process viral polyproteins to functional complete units. SARS CoV-2 3CL protease (main protease) is the core protease protein in CoV and corresponds to non-structural protein 5. SARS CoV-2 3CL cleaves the CoV polyprotein at 11 locations. SARS CoV-2 3CL protease has a cysteine-histidine catalytic dyad at its active site and cleaves a Gln−(Ser/Ala/Gly) peptide bond. SARS CoV-2 3CL protease at position P1 cleaves the bond between the glutamine and serine/alanine/glycine. SARS CoV-2 3CL protease is necessary in the processing of the CoV replicase polyprotein.

Source

Escherichia Coli.

Physical Appearance

Filtered White lyophilized (freeze-dried) powder.

Formulation

CoV-2 3CL solution contains 5 % Trehalose, 0.02 % Tween-20 and PBS, pH 7.4.

Stability

Store lyophilized protein at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles . Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C.

Purity

Protein is >98% pure as determined by SDS-PAGE and HPLC analyses.

Amino acid sequence

SGFRKMAFPS GKVEGCMVQV TCGTTTLNGL WLDDVVYCPR HVICTSEDML NPNYEDLLIR KSNHNFLVQA GNVQLRVIGH SMQNCVLKLK VDTANPKTPK YKFVRIQPGQ TFSVLACYNG SPSGVYQCAM RPNFTIKGSF LNGSCGSVGF NIDYDCVSFC YMHHMELPTG VHAGTDLEGN FYGPFVDRQT AQAAGTDTTI TVNVLAWLYA AVINGDRWFL NRFTTTLNDF NLVAMKYNYE PLTQDHVDIL GPLSAQTGIA VLDMCASLKE LLQNGMNGRT

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ILGSALLEDE FTPFDVVRQC SGVTFQ

Biological Activity

CoV-2 3CL is a cysteine protease that cleaves proteins with sequences including LQ(S/A/G). The cleavage takes c-terminal to the glutamine residue.

Solubility

It is recommended to add deionized water to prepare a working stock solution of approximately 0.5mg/ml and let the lyophilized pellet dissolve completely. CoV-2 3CL is not sterile! Please filter the product by an appropriate sterile filter before using it in the cell culture.

Precautions

CoV-2 3CL is for research use only and not for use in diagnostic or therapeutic procedures.