

Recombinant SARS-CoV-2 3CLpro, His-tagged

Cat. No. HUM-323 Lot. No. (See product label)

SPECIFICATION

Product Overview

Active recombinant full-length SARS-CoV-2 3C-Like Proteinase (3CLpro), part of the large replicase polyprotein 1ab (S3264-Q3569), expressed in E. coli cells with an N-terminal His-tag. SARS-CoV-2, previously known as the 2019 Novel Coronavirus (2019-nCoV), causes the pandemic COVID-19 disease.

Tag

His

Background

In December 2019 a novel coronavirus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), formerly known as the 2019 novel coronavirus (2019-nCoV) was identified in Wuhan, China, causing a world-wide pandemic. Three coronaviruses, SARS-CoV, MERS-CoV, and SARS-CoV-2 have been identified as being a highly pathogenic for humans, and there is currently no effective antiviral treatment. Therefore, studies are focused on rapid development of vaccines and antiviral drugs to prevent and treat coronavirus infection. There are several potential strategies to pharmacologically fight against the disease (COVID-19), including vaccines, monoclonal antibodies, oligonucleotide-based therapies, peptides, interferon therapies, and small-molecule drugs (Dömling & Gao, 2020). SARS-CoV-2 3C-like proteinase (3CLpro) is the nonstructural protein number 5, also a cysteine protease, that is released from the virally encoded polyprotein by extensive proteolytic processing. The 3CLpro cleaves the C-terminus of the large replicase polyprotein 1ab (~790 kDa) at no fewer than 11 sites (Hegyi et al., 2002). Inhibiting the activity of this enzyme would block viral replication (Zhang et al., 2020). The functional importance of 3CLpro in the viral life cycle makes this protease an attractive target for the development of drugs directed against SARS and other coronavirus infections (Anand

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et al., 2003).

Purity

>90% purity.

Formulation

Presented as liquid in 50mM sodium phosphate, pH7.5, 300mM NaCl, 200mM imidazole, 1mM DTT, 10% glycerol.

Notes

This product is intended for research and manufacturing uses only. It is not a diagnostic device. The user assumes all responsibility for care, custody and control of the material, including its disposal, in accordance with all regulations.

Type

Recombinant

ClassID 1

Infectious Disease

GENE INFORMATION**Synonyms**

SARS-CoV-2 3C-Likease (3CLpro)

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