

Recombinant 2019-nCoV PLpro Protein, His-tagged

Cat. No. PLpro-033C **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant 2019-nCoV PLpro/papain-like protease, part of a large replicase polyprotein 1ab (E1564-Y1882), was expressed in E. coli cells with an N-terminal His tag.
Species	Sars-Cov-2
Source	E.coli
ProteinLength	1564-1882
Description	2019-nCoV papain-like protease (PLpro), also known as SARS-CoV-2 PLpro, is a virally encoded cysteine protease that acts on three cleavage sites of the viral polyprotein to release mature non-structural proteins (nsp) 1, 2 and 3, a process that is essential for viral replication. In addition, PLpro possesses deubiquitinating and delSGylating activities, thus negatively regulating the ubiquitin and ISG15-dependent host immune response during viral infection. PLpro also participates together with nsp4 in the assembly of virally-induced cytoplasmic double-membrane vesicles necessary for viral replication.
Molecular Mass	38 kDa
Applications	Activity Assay, Inhibition Profile
Storage	Store product at –70 centigrade. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most

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favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Concentration 0.2 µg/µL

Storage Buffer Recombinant protein stored in 50mM sodium phosphate, pH 7.5, 300mM NaCl, 150mM imidazole, 1 mM DTT, 10% glycerol.

GENE INFORMATION

Gene Name [ORF1ab ORF1a polyprotein;ORF1ab polyprotein \[Severe acute respiratory syndrome coronavirus 2 \]](#)

Official Symbol [ORF1ab](#)

Synonyms ORF1ab; ORF1a polyprotein;ORF1ab polyprotein; ORF1a polyprotein;ORF1ab polyprotein; leader protein; nsp2; nsp3; nsp4; 3C-like proteinase; nsp6; nsp7; nsp8; nsp9; nsp10; RNA-dependent RNA polymerase; helicase; 3'-to-5' exonuclease; endoRNase; 2'-O-ribose methyltransferase; leader protein; nsp2; nsp3; nsp4; 3C-like proteinase; nsp6; nsp7; nsp8; nsp9; nsp10; nsp11; pp1ab; translated by -1 ribosomal frameshift; pp1a

Gene ID [43740578](#)

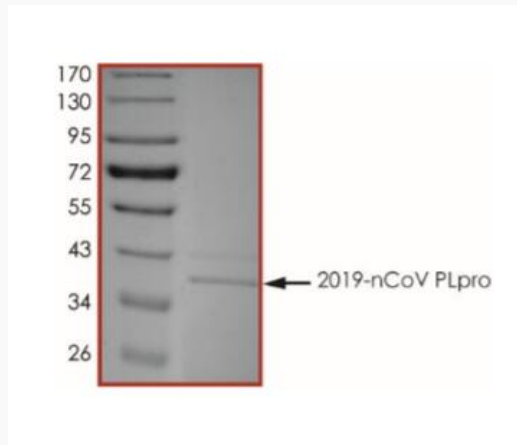
Protein Refseq [YP_009724389](#)

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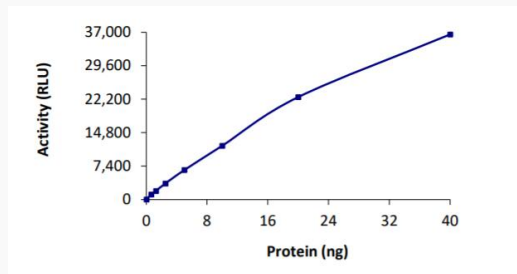
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Purity



The purity of 2019-nCoV PLpro was determined to be ~80% by densitometry.
Approx. MW 38 kDa.

Activity



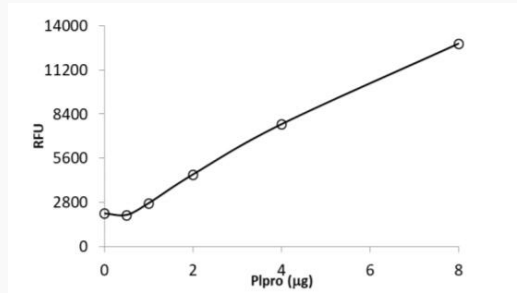
The DUB specific activity of 2019-nCoV PLpro was determined to be 7.2 nmol/min/mg as per the DUB activity assay protocol. The IC₅₀ of the reversible DUB inhibitor PR-619 was 10.13 μM in the PLpro inhibition profile assay.

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Activity



The protease specific activity of 2019-nCoV PLpro was determined to be ≥ 450 pmol/min/mg at an enzyme concentration of 4 μg as per the proteolytic activity assay protocol.

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