

Recombinant SARS-CoV-2 PLpro Protein

Cat. No. PLpro-24S **Lot. No.** (See product label)

SPECIFICATION

Product Overview Recombinant SARS-CoV-2 PLpro Protein without tag was expressed in E. coli.

Species SARS-CoV-2

Source E.coli

Description

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is an enveloped, positive-sense, single-stranded RNA virus that causes coronavirus disease 2019 (COVID-19). Virus particles include the RNA genetic material and structural proteins needed for invasion of host cells. Once inside the cell the infecting RNA is used to encode structural proteins that make up virus particles, nonstructural proteins that direct virus assembly, transcription, replication and host control and accessory proteins whose function has not been determined.~ ORF1ab, the largest gene, contains overlapping open reading frames that encode polyproteins PP1ab and PP1a. The polyproteins are cleaved to yield 16 nonstructural proteins, NSP1-16. Production of the longer (PP1ab) or shorter protein (PP1a) depends on a -1 ribosomal frameshifting event. The proteins, based on similarity to other coronaviruses, include the papain-like proteinase protein (NSP3), 3C-like proteinase (NSP5), RNA-dependent RNA polymerase (NSP12, RdRp), helicase (NSP13, HEL), endoRNase (NSP15), 2'-O-Ribose-Methyltransferase (NSP16) and other nonstructural proteins. SARS-CoV-2 nonstructural proteins are responsible for viral transcription, replication, proteolytic processing, suppression of host immune responses and suppression of host gene expression. The RNA-dependent RNA polymerase is a target of antiviral therapies. SARS-CoV-2 Papain like protease (PLpro) is one of the viral proteases to

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process viral polypeptide to functional proteins, the process essential for viral transcription, replication and virion assembly. PLpro can deubiquitinate host cell proteins and inactivate the NF-κB pathway, resulting in the immune suppression of host cells. Due to its multiple roles in viral replication and host cell control, PLpro is considered a potential antiviral target.

Molecular Mass	37 kDa
Purity	> 95% by SDS-PAGE
Usage	For research purposes only. Inhibitor Screening and activity assays
Storage	Stable for 12 months at -80 centigrade, Avoid freeze/thaw cycles
Storage Buffer	25 mM HEPES, pH7.4, 100 mM NaCl, 2 mM DTT, 10% Glycerol

GENE INFORMATION

Gene Name	ORF1ab ORF1a polyprotein; ORF1ab polyprotein [Severe acute respiratory syndrome coronavirus 2]
Official Symbol	PLpro
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; YP_009724389.1; pp1ab; translated by -1 ribosomal frameshift; pp1a; Papain-like Protease
Gene ID	43740578

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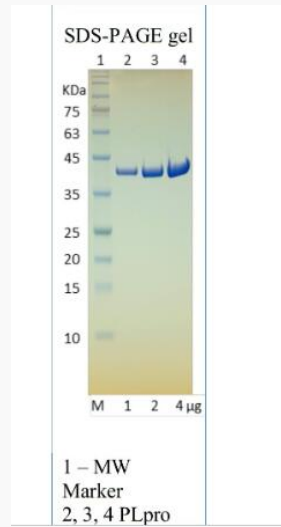
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Protein Refseq YP_009724389

UniProt ID P0DTD1

SDS-PAGE



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