

Recombinant SARS-CoV-2 ORF1ab Protein, MBP-tagged

Cat. No. ORF1ab-02S **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Severe acute respiratory Coronavirus 2 3C-like protease (SARS-CoV-2 3CL Protease), GenBank Accession No. YP_009725301, a.a. 1-306(full length), with an N-terminal MBP-tag, expressed in an E. coli expression system.
Species	SARS-CoV-2
Source	E.coli
ProteinLength	1-306
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.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

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.

Form	Aqueous buffer solution
Molecular Mass	77.5 kDa
Purity	≥90%
Applications	Useful for the study of enzyme kinetics, screening inhibitors, and selectivity profiling.
Storage	At least 6 months at –80 centigrade.
Concentration	1.65 mg/mL
Storage Buffer	40 mM Tris-HCl, pH 8.0, 110 mM NaCl, 2.2 mM KCl, 20% glycerol, 3 mM DTT, 8 mM maltose.

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

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

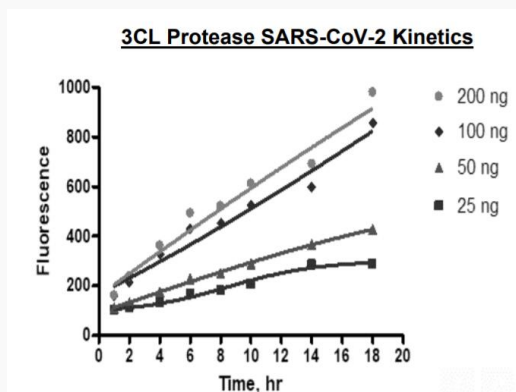
proteinase; nsp6; nsp7; nsp8; nsp9; nsp10; nsp11; pp1ab; translated by -1 ribosomal frameshift; pp1a

Gene ID 43740578

Protein Refseq YP_009725301

UniProt ID P0DTC1

Quality Assurance



SDS-PAGE

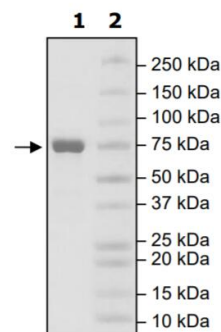
**4-20% SDS-PAGE
Coomassie staining**

Lane 1:
3CL protease

Lane 2:
Protein Marker

MW: 77.5 kDa

Purity: ≥90%



Tel: 1-631-559-9269 1-516-512-3133

Email: info@creative-biomart.com Fax: 1-631-938-8127

45-1 Ramsey Road, Shirley, NY 11967, USA