Data Sheet (Cat.No.TMPY-05727)

TargetMol

SARS-CoV-2 3CLpro/3C-like protease Protein (His & Avi)

General Information

Protein Construction:	A DNA sequence encoding the SARS-CoV-2 (2019-nCoV) 3CL Protease (YP_009725295.1) (Ser3264-Gln3569) was expressed with a N-terminal polyhistidine tag followed by a MBP tag. Predicted N terminal: Met
Species:	SARS-CoV-2
Expression Host:	E. coli
Accession:	YP_009725295.1
Molecular Weight:	36.57 kDa (predicted)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE.
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

3C-like protease (3CLpro) is the main protease of Humann Coronavirus. 3C-like protease (3CLpro) is a key enzyme, as it cleaves several sites to produce non-structural proteins that are essential for genome replication and Coronavirus virion production, such as an RNA-dependent RNA polymerase, a helicase, ribonucleases and 3CLpro itself, from two types of polyproteins (pp1a and pp1ab). SARS-CoV 3CLpro exists as a homodimer and each protomer has an active site.

Reference

Tomonari Muramatsu,et al.Autoprocessing mechanism of severe acute respiratory syndrome coronavirus 3C-like protease (SARS-CoV 3CLpro) from its polyproteins.FEBS Journal.2013Ziebuhr J,Molecular biology of severe acute respiratory syndrome coronavirus. Curr Opin Microbiol.2004

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