

SARS-CoV-2 Plpro/papain-like protease Protein (aa 1564-1880, His)

General Information

Protein Construction:	A DNA sequence encoding the SARS-CoV-2 (2019-nCoV) papain-like protease (QVD65746.1) (Glu1564-Val1880) was expressed with a polyhistidine tag at the N-terminus. Predicted N terminal: Met
Species:	SARS-CoV-2
Expression Host:	E. coli
Accession:	QVD65746.1
Molecular Weight:	36.79 kDa (predicted)

QC Testing

Biological Activity:	Measured by its ability to cleave a fluorogenic peptide substrate, Arg-Leu-Arg-Gly-Gly-AMC (RLRGGAMC). The Specific Activity is >80pmols/min/ μ g
Purity:	> 90 % as determined by SDS-PAGE.
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing 20 mM Tris 500 mM NaCl, 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

The coronaviral proteases, papain-like protease (PLpro) and 3C-like protease (3CLpro), are attractive antiviral drug targets because they are essential for coronaviral replication. PLpro has the additional function of stripping ubiquitin and ISG15 from host-cell proteins to aid coronaviruses in their evasion of the host innate immune responses. Targeting PLpro with antiviral drugs may have an advantage in not only inhibiting viral replication but also inhibiting the dysregulation of signaling cascades in infected cells that may lead to cell death in surrounding,

uninfected cells.

Reference

Yahira M. Báez-Santos. The SARS-coronavirus papain-like protease: Structure, function and inhibition by designed antiviral compounds. Antiviral Research.2015

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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