

Lot # XXXXX

MATERIAL DATA SHEET

3CL Protease, SARS-CoV-2 virus recombinant Cat. # E-720

The 3CL protease (aka 3CL^{pro}, M^{pro} or "Main Protease) from the human SARS-CoV-2 coronavirus (Severe Acute Respiratory Syndrome coronavirus 2) is a C30-type cysteine protease located within the non-structural proteins 3 (NS3) section of the viral polyprotein. 3CL^{pro} activity is required to process the viral polyprotein into functional, mature subunits, and there are 11 or more sites of cleavage, many containing the sequence LQ[S/A/G]; the protease cleaves c-terminal to the glutamine amino acid. Along with the CoV-2 Papain-Like Protease (catalog number E-611), 3CL^{pro} presents an attractive target for therapeutic intervention for COVID-19. Because no human proteases with a similar cleavage specificity are known, inhibitors of 3CL^{pro} are unlikely to cause mechanism-based toxicity. This recombinant protein is untagged.

Product Information

Quantity:	50 µg
Stock:	1.7 mg/ml (50 µM) in 50 mM HEPES pH 7.5, 150 mM NaCl, 1 mM DTT, 1 mM EDTA.
MW:	34 kDa
Purity:	> 95% by SDS-PAGE under reducing conditions and visualized by Colloidal Coomassie Blue stain

Use & Storage

Use:	Recombinant SARS-CoV-2 virus 3CL Protease is a cysteine protease that cleaves proteins with sequences including a LQ↓[S/A/G]. Reaction conditions will need to be optimized for each specific application.
Storage:	Store at -80°C. Avoid multiple freeze/thaw cycles.

Literature

References:	Chen Y.W. <i>et al.</i> (2020) <u>F1000Research</u> doi: 10.12688/f1000research.22457.2 Pillaiyar T., <i>et al.</i> (2016) <u>J. Med. Chem.</u> 59 : 6595 Zhang L. <i>et al.</i> (2020) <u>Science</u> doi: 10.1126/science.abb3405
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840 Memorial Drive, Cambridge, MA 02139 Phone: 617-576-2210 FAX: 617-492-3565
www.bostonbiochem.com

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