

Recombinant SARS-CoV-2 3CL Protease

Information

Gene ID	
Accession #	
Alternate Names	
Source	Escherichia coli.
M.Wt	Approximately 33.8 kDa, a single non-glycosylated polypeptide chain containing 306 amino acids.
AA Sequence	SGFRKMAFPS GKVEGCMVQV TCGTTTLNGL WLDDVVCPR HVICTSEDML NPNYEDLLIR KSNHNFLVQA GNVQLRVIGH SMQNCVLKLLK VDTANPKTPK YKQVRIQPGQ TFSVLACYNG SPSGVYQCAM RPNFTIKGSF LNGSCGSVGF NIDYDCVSFC YMHHMELPTG VHAGTDLEGN FYGPFVDRQT AQAAGTDTTI TVNVLAWLYA AVINGDRWFL NRFTTTLNDF NLVAMKYNNE PLTQDHVDIL GPLSAQTGIA VLDMCASLKE LLQNGMNGRT ILGSALLEDE FTPFDVVRQC SGVTFQ
Appearance	White lyophilized (freeze-dried) powder.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles - 12 months from date of receipt, -20 to -70 °C as supplied - 1 month, 2 to 8 °C under sterile conditions after reconstitution - 3 months, -20 to -70 °C under sterile conditions after reconstitution
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.0, with 5 % Trehalose, 0.02 % Tween-20.
Reconstitution	We recommend that this vial is briefly centrifuged prior to opening. Reconstitute in sterile distilled water or aqueous buffer containing 0.1 % BSA to a concentration of 0.1-1.0 mg/mL. Stock solutions should be apportioned into working aliquots and stored at ≤ -20 °C. Further dilutions should be made in appropriate buffered solutions.
Biological Activity	Test in processing.
Shipping Condition	Gel pack.
Handling	Centrifuge the vial prior to opening.
Usage	For Research Use Only! Not to be used in humans.

Components and Storage

Components	50µg	100µg
Recombinant SARS-CoV-2 3CL Protease	50µg	100µg

Use a manual defrost freezer and avoid repeated freeze-thaw cycles

- 12 months from date of receipt, -20 to -70 °C as supplied
- 1 month, 2 to 8 °C under sterile conditions after reconstitution
- 3 months, -20 to -70 °C under sterile conditions after reconstitution

Quality Control

Purity	> 97 % by SDS-PAGE.
Endotoxin	Less than 0.1 EU/μg of rSARS-CoV-2 3CL Protease as determined by LAL method.

Description

The 3CL protease (aka 3CLpro, Mpro or "Main" Protease) from the human SARS-CoV-2 coronavirus (Severe Acute Respiratory Syndrome coronavirus 2) is a C30-type cysteine protease. 3CLpro 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, 3CLpro presents an attractive target for therapeutic intervention for COVID-19. Because no human proteases with a similar cleavage specificity are known, inhibitors of 3CLpro are unlikely to cause mechanism-based toxicity.

Reference

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