

Recombinant SARS-CoV-2 3CL Protease

#R00599

Size: 50 µg/100 µg

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.



Warning: This product is intended for scientific research only. It is not to be used for medical or diagnostic procedures in humans or animals, nor as a food, cosmetic, or household product.

Background

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.

AA Sequence

SGFRKMAFPSGKVEGCMVQVTCGTTTLNGLWLDDV
VYCPRHVICTSEDMLNPNYEDLLIRKSNHNFLVQAGN

VQLRVIGHSMQNCVLKLVDTANPKTPKYKFVRIQPG
QTFSVLACYNGSPSGVYQCAMRPNFTIKGSFLNGSC
GSVGFNIDYDCVSFCYMHMELPTGVHAGTDLEGNF
YGPFDVRQTAQAAGTDTTITVNVLAWLAAVINGDRW
FLNRFTTTTLNDFNLVAMKYNIEPLTQDHVDILGPLSA
QTGIAVLDMCASLKELLQNGMNGRTILGSALLEDEFT
PFDVVRQCSGVTFQ

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.

Product Specification

Species	SARS-CoV-2
Source	Escherichia coli.
Molecular Weight	Approximately 33.8 kDa, a single non-glycosylated polypeptide chain containing 306 amino acids.
Purity	> 97 % by SDS-PAGE.
Biological	Test in processing.
Activity	
Physical	White lyophilized (freeze-dried)
Appearance	powder.
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in PBS, pH 7.0, with 5 % Trehalose, 0.02 % Tween-20.
Endotoxin	Less than 0.1 EU/µg of rSARS-CoV-2 3CL Protease as determined by LAL method.

Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
