Product Information

Mpro, 3CL Protease from coronavirus SARS-CoV2
recombinant, expressed in E. coli

Catalog Number SAE0172
Storage Temperature –20 °C

Synonym: Main protease from SARS-CoV2 virus, 3CLpro, 3C Like protease

Product Description
Maturation of SARS-CoV2 virus depends on cleavage of the overlapping large polyproteins 1a and 1ab by two viral proteases, Mpro (main protease) and Pplpro (Papain-like protease). Proteolytic cleavage by Mpro of the 1ab polyprotein occurs at 11 sites: 7 sites within the 1a polyprotein, and 4 sites within the 1ab polyprotein. This results in maturation of 16 viral non-structural proteins.\(^1,2\)

Mpro protease forms a functional homodimer. Both the N-terminus and the C-terminus of Mpro have been shown to be critical for dimer formation and for enzyme function.\(^2\)

The Mpro protease is an ideal target for antiviral drug design due to its high conservation between different coronavirus strains and absence of functional analogs in the human proteome.\(^2,3\) It is noteworthy that Mpro protease from SARS-CoV1 and SARS-CoV2 are functionally identical.\(^4,5\)

This fully active Mpro protease contains the complete sequence of Mpro protease (Accession: YP_009725301.1) without any additional tags. It is provided as a lyophilized powder for increased stability.

The product is supplied lyophilized from 20 mM HEPES (pH 7.3), 2.5% Trehalose, and 0.05% Tween 20.

Precautions and Disclaimer
For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability
The product retains activity for at least 2 years when stored lyophilized at –20 °C.

Procedure
It is suggested to reconstitute the product in water or in 10% aqueous glycerol solution at a protein concentration of 1-2 mg/mL. Aliquot the protein solution and store at -20 °C. Avoid freeze-thaw cycles.

References

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