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Produktinformation

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siehe unsere Liefer- und Versandbedingungen

Zuschläge

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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PRODUCT INFORMATION

SARS-CoV-2 M^{pro} Protein

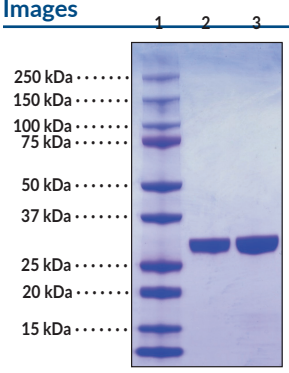
Item No. 30588

Overview and Properties

Synonyms:	3C-like Proteinase, Coronavirus Endopeptidase C30, Peptidase C30, Severe Acute Respiratory Syndrome Coronavirus 2 M^{pro}
Source:	Active recombinant SARS-CoV-2 M^{pro} expressed in *E. coli*
Amino Acids:	1-306; Location on P0DTD1 3,264-3,569
Uniprot No.:	P0DTD1
Molecular Weight:	33.9 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	***batch specific*** (≥95% estimated by SDS-PAGE)
Supplied in:	20 mM HEPES, pH 7.5, with 2.5 mM DTT and 10% glycerol
Protein Concentration:	***batch specific*** mg/ml
Activity:	***batch specific*** U/ml
Specific Activity:	***batch specific*** U/mg
Unit Definition:	One unit is defined as the amount of enzyme required to produce 1 nmol of EDANS at 25°C in 25 mM HEPES, pH 7.0, containing 150 mM NaCl, 0.5 mM EDTA, 25% glycerol, 4 mM DTT, and 260 µM SARS-CoV-2 M^{pro} Substrate.

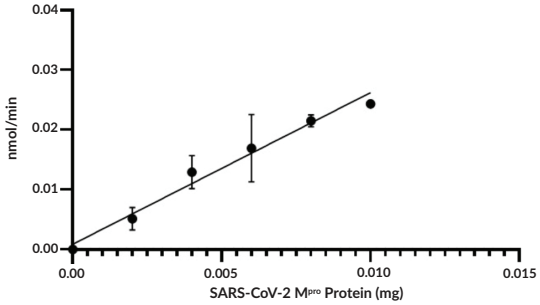
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: MW Markers
Lane 2: 2 µg SARS-CoV-2 M^{pro} Protein
Lane 3: 4 µg SARS-CoV-2 M^{pro} Protein

SDS-PAGE Analysis of SARS-CoV-2 M^{pro} Protein.



SARS-CoV-2 M^{pro} Protein activity was determined using a SARS-CoV-2 Main Protease Inhibitor Screening Assay.

Representative data shown; actual activity may vary between batches.

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PRODUCT INFORMATION

Description

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is an enveloped positive-stranded RNA virus and the causative agent of COVID-19, a primarily respiratory illness characterized by fever, cough, and shortness of breath that can lead to life-threatening complications.[1-5] The SARS-CoV-2 genome contains approximately 30 kilobases and 14 open reading frames (ORFs) that encode four structural proteins: spike, envelope, membrane, and nucleocapsid, as well as 16 non-structural proteins and 9 accessory factors.[6] The SARS-CoV-2 main protease (M^{pro}), also known as 3C-like protease ($3CL^{pro}$), is encoded within the non-structural protein 5 (nsp5) region of *ORF1ab*.[6] Auto-activation of SARS-CoV-2 M^{pro} cleaves nsp5-16, which, together with the nsp1-4, form the SARS-CoV-2 replication and transcription complex (RTC), which is critical for the viral replication cycle.[6] Inhibition of SARS-CoV-2 M^{pro} activity reduces SARS-CoV-2 replication in infected cells *in vitro*, as well as decreases lung viral loads and pulmonary lesions in *ACE2* transgenic mice infected with SARS-CoV-2.[7,8] Cayman's SARS-CoV-2 M^{pro} protein can be used for enzyme activity assays.

References

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6. Romano, M., Ruggiero, A., Squeglia, F., *et al.* A structural view of SARS-CoV-2 RNA replication machinery: RNA synthesis, proofreading and final capping. *Cells* **9(5)**, 1267 (2020).
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