## SARS-CoV-2 3CL-Mpro protein

Full length protein Cat. no. P2020-018



### **Product Information**

Protein: SARS-CoV-2 3CL-Mpro-His (~ 36 kDa)

Sequence: SGFRKMAFPSGKVEGCMVQVTCGTTTLNGLWLDDVVYCPRHVICTSEDMLNPNYEDLLIR

KSNHNFLVQAGNVQLRVIGHSMQNCVLKLKVDTANPKTPKYKFVRIQPGQTFSVLACYNG SPSGVYQCAMRPNFTIKGSFLNGSCGSVGFNIDYDCVSFCYMHHMELPTGVHAGTDLEGN FYGPFVDRQTAQAAGTDTTITVNVLAWLYAAVINGDRWFLNRFTTTLNDFNLVAMKYNYE PLTQDHVDILGPLSAQTGIAVLDMCASLKELLQNGMNGRTILGSALLEDEFTPFDVVRQC

**SGVTFO** 

N-terminal His-tag not shown in sequence.

Source: Recombinantly expressed in E.coli Rosetta2 (DE3).

Tag(s): His-tag, N-terminal

Purification: Purified by affinity chromatography and subsequent buffer exchange.

Formulation: PBS, pH 7.4; contains Glycerol as protectant

Liquid, stored and shipped at -80 °C.

Purity: > 90 % (will be determined by densitometry of Coomassie stained gel, example next page)

Concentration: Will be determined by BCA-Assay.

Long-term storage: No recommendations.

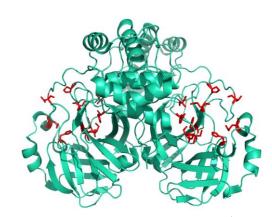
Comment: N-terminal His-tag may interfere with activity of protein.

If activity is crucial, please choose the tag-free variant (Cat. No. P2020-019) or the

unmodified variant with authentic N-terminus (Cat. No. P2020-027).

#### **Background Information:**

The new coronavirus SARS-CoV-2 expresses two proteases, the papain-like protease (PLpro) and 3C-like protease (3CLpro). Both belong to the group of cysteine proteases, as they have a cysteine residue at their catalytic site. Their main function is the processing of the viral polyprotein, that contains two cleavage sites to build up the viral replicase complex. Additionally, PLpro has the ability of removing ISG15 and ubiquitin from viral proteins expressed in the cell, this enables evasion from the innate immune response by the host. This represents an interesting target for drug development. This is because it not only would inhibit viral replication, but would also prevent the massive immunological response that results from the over-activation of the host's immune system. Such an over-activation can lead to damage of the uninfected cells and thus to a worsening of the patient's condition.



Structural model of the 3C-like protease (3CL-Mpro) of SARS-CoV-2 shown as active dimer. The amino acids relevant for binding of the substrate are highlighted (red).

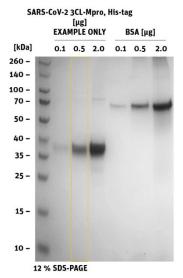
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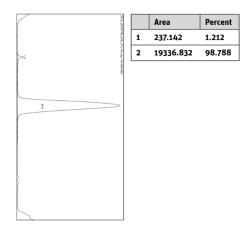


### **Product Information**

### Quality Information (provided for each lot):



SDS-PAGE/Coll.Coomassie



Histogram (of marked lane in gel picture)