SARS-CoV (His_6-PLpro)

Cat. No. SSB-DE0024
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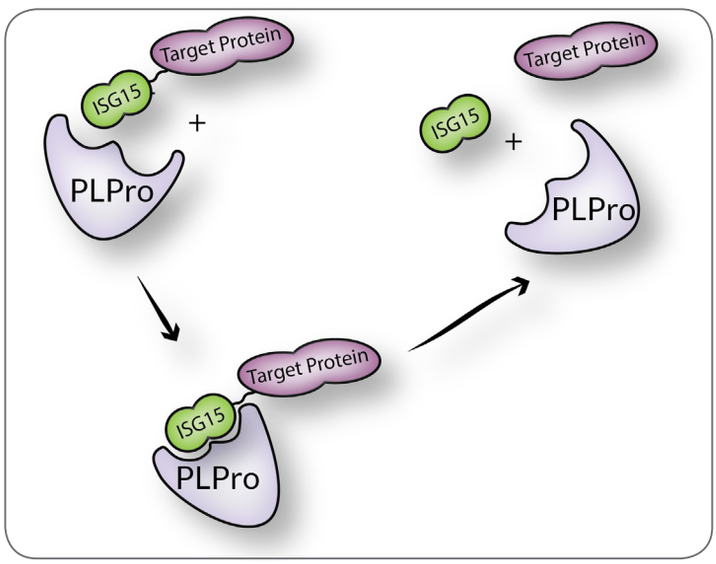
The severe acute respiratory syndrome coronavirus papain-like protease (SARS-CoV PLpro) is involved in the processing of the viral polyprotein. Proteolytic processing of the coronavirus replicase poly-protein is essential for generating a functional virus replication complex. PLpro possesses both deubiquitinating or deISGylating activity and can process Lys-48 and Lys-63 linked polyubiquitin chains (free chains or from cellular substrates). It works in concert together with nsp4 in the assembly of virally-induced cytoplasmic double-membrane vesicles necessary for viral replication. It strongly antagonizes the innate immune induction of type I interferon by blocking the phosphorylation, dimerization and therefore the nuclear translocation of host IRF3. In addition, it prevents also host NF-kappa-B signaling.

PLpro is able to hydrolyze both ISG15-Rhodamine110 or diubiquitin/tetra-ubiquitin substrates, but is very inefficient when processing mono-Ub conjugates or synthetic peptide substrates. This SARS Coronavirus recombinant PLpro is N-terminally His_6-tagged.



Product Information

Quantity: 50µg **Molecular Weight:** 37.3 kDa

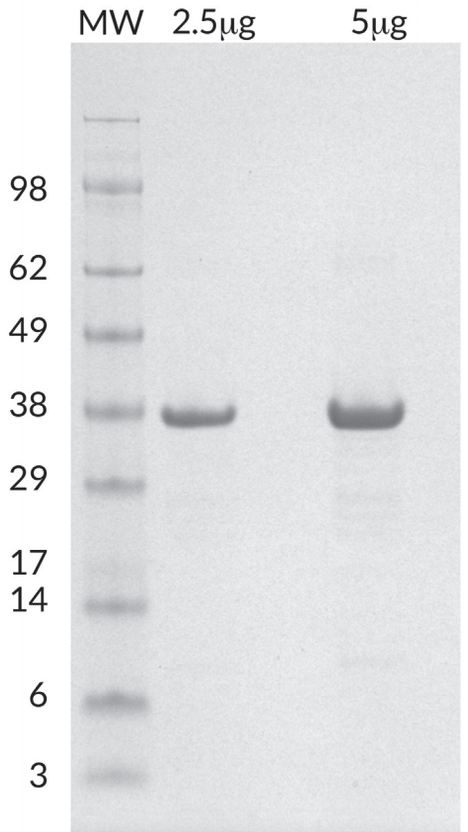
Concentration: 25 µM, 0.93 mg/mL

Purity: >95% by SDS-PAGE

Storage Buffer: 50 mM HEPES pH 7.5, 100 mM NaCl, 1 mM TCEP

Storage: -80C, Avoid multiple freeze / thaw

Quality Control and Performance Data



His_6-PLpro SDS-PAGE. From left to right, increasing amounts of His_6-PLpro loaded onto a 4-20% SDS-PAGE gel, stained with coomassie brillant blue. Purity is > 95%.

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www.southbaybio.com

Contact:
info@southbaybio.com

5941 Optical Ct, Suite 229
San Jose, CA 95138 USA

References

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2) Ratia, K. et al. "Severe Acute Respiratory Syndrome Coronavirus Papain-Like Protease: Structure Of A Viral Deubiquitinating Enzyme". Proceedings Of The National Academy Of Sciences, vol 103, no. 15, 2006, pp. 5717-5722. Proceedings Of The National Academy Of Sciences, doi:10.1073/pnas.0510851103.

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San Jose, CA 95138 USA