

Active Recombinant SARSV Papain-like Protease protein

Cat. No. Papain-like Protease-207 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant SARSV Papain-like Protease(Glu1541 - Lys1841) was expressed in E. coli.
Species	SARSV
Source	E.coli
ProteinLength	1541-1841 a.a.
Description	The Papain-like protease ("PLPro") from the human SARS coronavirus (Severe Acute Respiratory Syndrome coronavirus) is a cysteine protease located within the non-structural protein 3 (NS3) section of the viral polypeptide. PLPro activity is required to process the viral polyprotein into functional, mature subunits; specifically, PLPro cleaves a site at the amino-terminus of the viral replicase region. In addition to its role in viral protein maturation, PLPro possesses a deubiquitinating and deISGylating activity. In vivo, this protease antagonizes innate immunity by inhibiting IRF3-induced production of type I interferons. PLPro has been reported to hydrolyze both K48- and K63 linked poly-Ubiquitin chains in vitro. When used at low concentrations, the enzyme demonstrates a strong preference for K48-linked tetra-Ubiquitin chains which are primarily converted to di-Ubiquitin species. This protein contains an N-terminal 6-His tag.
Form	X mg/ml (X µM) in 50 mM HEPES pH 7.5, 100 mM NaCl, 2 mM TCEP
Bio-activity	Recombinant SARS virus PLPro is a Ubiquitin- and ISG15-deconjugating enzyme.

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Reaction conditions will need to be optimized for each specific application. We recommend an initial PLPro concentration of 20-100 nM when using Ubiquitin-AMC (U-550) or Ubiquitin-Rhodamine 110 (U-555) as a substrate. Using tetra-Ubiquitin chains as a substrate, PLPro demonstrates a preference for K48 linkages when using a 100 nM enzyme concentration--at higher enzyme concentration other linkages are cleaved as well.

Molecular Mass	Predicted Molecular Mass: 37 kDa
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Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
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Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -70 centigrade as supplied. 3 months, -70 centigrade under sterile conditions after opening.
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