

PL-PRO Protein, 2019-nCoV (His)

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| Cat. No.: | HY-P702190 |
| Synonyms: | Replicase polyprotein 1a; pp1a; ORF1a polyprotein |
| Species: | Virus |
| Source: | E. coli |
| Accession: | P0DTC1 (E1-T312) |
| Gene ID: | / |
| Molecular Weight: | |

PROPERTIES

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| Appearance | Solution. |
| Formulation | Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol. |
| Endotoxin Level | <1 EU/µg, determined by LAL method. |
| Reconstitution | Please use rapid thawing with running water to thaw the protein. |
| Storage & Stability | Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles. |
| Shipping | Shipping with dry ice. |

DESCRIPTION

Background

The PL-PRO protein emerges as a multifunctional key player in the intricate processes of transcription and replication of viral RNAs, hosting crucial proteinases responsible for polyprotein cleavages. Functionally strategic, it impedes host translation by associating with the open head conformation of the 40S subunit, and its C-terminus intricately binds to and obstructs the ribosomal mRNA entry tunnel. This interference plays a pivotal role in suppressing the antiviral response triggered by innate immunity or interferons. The collaborative formation of the nsp1-40S ribosome complex, orchestrated by PL-PRO, induces an endonucleolytic cleavage near the 5'UTR of host mRNAs, marking them for degradation. Notably, viral mRNAs exhibit heightened resistance to the nsp1-mediated inhibition of translation, attributed to their distinctive 5'-end leader sequence. The multifaceted functions of PL-PRO underscore its indispensable role in manipulating host cellular processes, facilitating viral replication, and evading host defenses.

Caution: Product has not been fully validated for medical applications. For research use only.

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