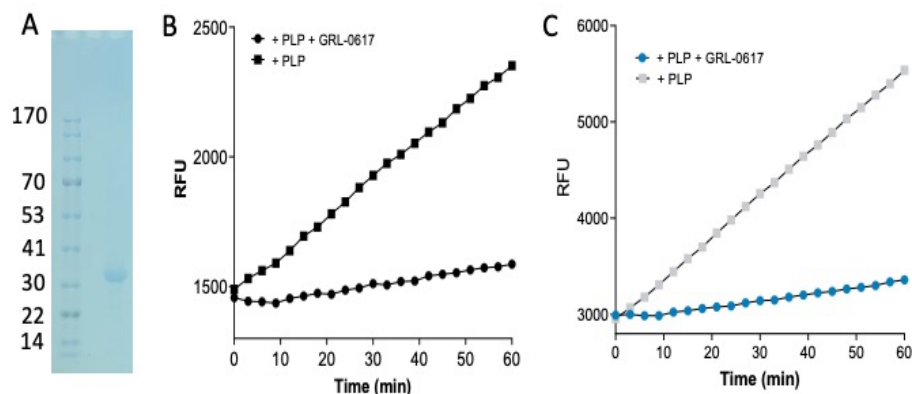


PLPro

Cat. # V2120, V2121

Also Known as: Papain-like protease, PLPro, PLP, SARS-CoV-2 PLP
Accession #: YP_009725299.1
MW (no tag): 36 kDa
Species: SARS Covid-2 Papain-like protease protein from Glu746 to Lys1060
Source: Bacterial recombinant
Tag: No Tag
Stock Buffer: 20 mM Tris, pH 7.1 at 37 °C, 150 mM NaCl, 4 mM TCEP, 10% Glycerol and 0.01% Tween-20
Concentration: See tube label
Quality Assurance: >90% purify by SDS-PAGE; Cleavage of the fluorogenic substrates (see data below)

Image:



A. Coomassie stained SDS-PAGE of 5 ug recombinant PLPro.

B. Proteinase activity of recombinant PLPro.

Square: 20 μ M Dabcyl-FRLKGGAPIKGV-Edans+ 150nM PLPro.

Circle: 20 μ M Dabcyl-FRLKGGAPIKGV-Edans+ 150nM PLPro + 35 μ M RGL-0617 (PLPro inhibitor)

C. Deubiquitinating activity of PLPro.

Square: 0.75 μ M Ubiquitin Rhodamine 110 + 60nM PLPro.

Circle: 0.75 μ M Ubiquitin Rhodamine 110 + 60nM PLPro + 35 μ M RGL-0617.

Description:

Maturation of SARS-CoV-2 virus requires two proteases, 3C-like protease (3CLP) and Papain-like protease (PLP), to cleave the large polyproteins 1a and 1ab to generate functional proteins, which is essential for genome replication and Coronavirus virion production. Both proteases are encoded by the polyproteins. 3CLP is a cysteine protease and forms a homodimer. 3CLP is the drug target of PF-17321332, a main component of the oral anti-Covid-19 drug Paxlovid. PLP is also a cysteine protease that cleaves polyproteins and has deubiquitinating and deISG15ylating activities. PLP is also a potential anti-Covid-19 drug target. The recombinant SARS-CoV-2 papain-like protease contains the catalytic domain from Glu746 to Lys1060.

Storage:

Keep at -80 °C, avoid multiple freeze/thaw cycles.

Reference:

Zhang L., et al. (2020) Science doi: 10.1126/science.abb3405