

Recombinant SARS-CoV-2 NSP1 protein

Catalog No: 81314, 81614

Expressed In: *E. coli*

Quantity: 50, 1000 µg

Concentration: 1.4 µg/µl

Source: SARS-CoV-2

Buffer Contents: Recombinant SARS-CoV-2 NSP1 protein is supplied in 25 mM Tris-HCl pH 8.0, 300 mM NaCl, 10% glycerol and 0.5 mM TCEP

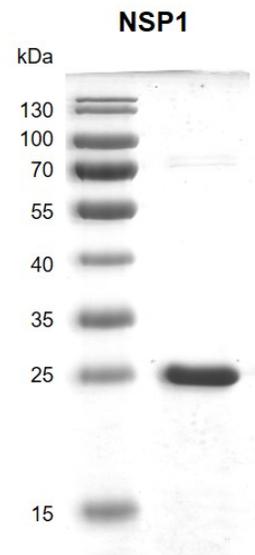
Background: Coronavirus replication and transcription machinery involves multiple virus-encoded nonstructural proteins (nsp). Coronaviruses are enveloped positive-stranded RNA viruses with the largest currently known RNA genomes. Expression of their genomes begins with the translation of two large replicase polyproteins, pp1a (>4,000 residues) and pp1ab (>7,000 residues), which are encoded by the viral replicase gene that comprises open reading frame 1a (orf1a) and orf1b1. pp1a and pp1ab are extensively processed by orf1a-encoded proteases to yield 15 or 16 mature nonstructural (replicase) proteins that assemble to form the membrane-associated viral replication and transcription machinery, which is vital to the viral life cycle.

SARS-CoV-2 NSP1 (Nonstructural Protein 1) is one of the nonstructural proteins encoded by SARS-CoV-2 orf1ab. The polyproteins of CoVs are cleaved by virus-encoded cysteine proteinases comprise papain- and chymotrypsin-like proteases into 16 nonstructural proteins including the expression of NSP1 to NSP11 by orf1a and encoding NSP12 to NSP16 by orf1b. According to reports, is highly conserved, crucial to the virus replication, survival in the society and spread among susceptible populations, and can be a potential virulence factor in COVID-19 through accelerating the cellular RNA degradation and consequently blocking the human immune response. The amino acid sequence of NSP1 is highly conserved among SARS-CoVs..

Protein Details: Recombinant SARS-CoV-2 NSP1 protein was expressed in *E. coli* cells as the full length protein (accession number YP_009725297.1) with a C-terminal Avi and a C-terminal 6×His tag. The predicted molecular weight of the protein is 19.78 kDa.

Application Notes: Recombinant SARS-CoV-2 NSP1 protein is suitable for use in the study of SARS-CoV-2. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data for this product is shown.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of arrival.



Recombinant SARS-CoV-2 NSP1 protein gel

12.5% SDS-PAGE with Coomassie blue staining

MW: 19.78 kDa

Purity: >90%