

SARS-CoV-2 Nucleocapsid Protein

Catalog # PVGS1683

Product Information

Primary Accession PODTC9
Species SARS-CoV-2

Sequence Met 1 - Ala 419

Purity > 90% as analyzed by SDS-PAGE

Biological Activity SARS-CoV-2 Nucleocapsid Protein (D63G, R203M, D377Y), His Tag can bind

with SARS-CoV-2 Nucleocapsid Antibody (N338), mAb, mouse (Cat. No.

A02135) in functional ELISA assay.

Expression System E.coli

Theoretical Molecular Weight 46.4 kDa

Formulation Supplied as a solution of 50 mM Tris-HCl, 150 mM NaCl, pH 8.0, containing

300 mM Imidazole

Storage & Stability Upon receiving, the product remains stable up to 6 months at -20 °C or below.

Please avoid repeated freeze-thaw cycles

Additional Information

Gene ID 43740575

Other Names Nucleoprotein {ECO:0000255 | HAMAP-Rule:MF_04096}, N, Nucleocapsid

protein {ECO:0000255 | HAMAP-Rule:MF_04096}, NC {ECO:0000255 | HAMAP-Rule:MF_04096}, Protein N

{ECO:0000255|HAMAP-Rule:MF_04096}, N {ECO:0000255|HAMAP-Rule:MF_04096}

Target Background SARS-CoV-2 (Severe acute respiratory syndrome coronavirus 2), also known as

2019-nCoV, is a positive-sense single-stranded RNA virus. It caused coronavirus disease 2019 (COVID-19). Nucleocapsid Protein is the most abundant structural protein of the coronavirus which is associated with the nucleic acid. The sublineage B.1.617.2 has been redesignated as a "variant of concern" (VOC-21APR-02) in May 2021, which spreads more quickly than the

original version of the virus.

Protein Information

Name N {ECO:0000255 | HAMAP-Rule:MF_04096}

Function

Packages the positive strand viral genome RNA into a helical ribonucleocapsid (RNP) and plays a fundamental role during virion assembly through its interactions with the viral genome and membrane protein M (PubMed:33264373). Plays an important role in enhancing the efficiency of subgenomic viral RNA transcription as well as viral replication. Attenuates the stress granules formation by reducing host G3BP1 access to host mRNAs under stress conditions (PubMed:34901782, PubMed:36534661).

Cellular Location

Virion {ECO:0000255 | HAMAP-Rule:MF_04096}. Host cytoplasm Secreted. Host extracellular space. Note=Probably associates with ER-derived membranes where it participates in viral RNA synthesis and virus budding. When located inside the virion, complexed with the viral RNA Can be secreted by unconventional protein secretion (UPS) (PubMed:35921414). When secreted, can bind to host glycosaminoglycans on infected and non infected cells (PubMed:35921414). Found in host cytoplasmic stress granules (PubMed:34901782). {ECO:0000255 | HAMAP- Rule:MF_04096, ECO:0000269 | PubMed:34901782, ECO:0000269 | PubMed:35921414}

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.