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SARS-CoV-2 Nucleocapsid Protein

Catalog # PVGS1683

Product Information

Primary Accession	P0DTC9
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'.