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Nucleocapsid protein

Catalog # PVGS1682

Product Information

Primary Accession	P0DTC9
Species	SARS-CoV-2
Sequence	Ser2-Ala419 (G204R, R203K)
Purity	≥ 90% as analyzed by SDS-PAGE
Biological Activity	SARS-CoV-2 Nucleocapsid protein (G204R, R203K), His Tag (Cat. No. Z03731) can bind with SARS-CoV-2 Nucleocapsid Antibody, Human Chimeric (Cat. No. A02039) in functional ELISA assay.
Expression System	E. coli
Theoretical Molecular Weight	46 kDa
Formulation	Supplied as a solution in PBS pH 7.4 containing 10% glycerol.
Storage & Stability	Upon receiving, this product remains stable for up to 6 months at -20 °C or below. 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 (2019 Novel Coronavirus) is a virus that causes illnesses ranging from the common cold to severe diseases. Recently, the new B.1.1.529 variant was confirmed in South Africa and preliminary evidence suggests an increased risk of reinfection with this variant. The B.1.1.529 variant was first reported to WHO on 24 November 2021 and WHO has designated this variant as a VOC (Variant of Concern), named Omicron. There are more than 30 mutations in the spike protein.

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'.