

## SARS-CoV-2 Nucleocapsid Protein Catalog # PVGS1683

### Specification

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#### SARS-CoV-2 Nucleocapsid Protein - 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

#### SARS-CoV-2 Nucleocapsid Protein - 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.

## SARS-CoV-2 Nucleocapsid 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:<a href="http://www.uniprot.org/citations/33264373" target="\_blank">33264373</a>). 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:<a href="http://www.uniprot.org/citations/34901782" target="\_blank">34901782</a>, PubMed:<a href="http://www.uniprot.org/citations/36534661" target="\_blank">36534661</a>).

### 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}

## SARS-CoV-2 Nucleocapsid Protein - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## SARS-CoV-2 Nucleocapsid Protein - Images