

**Synonym**

Nucleocapsid protein, NP, Protein N

**Source**

SARS-CoV-2 Nucleocapsid protein, His Tag (NUN-C5221) is expressed from human 293 cells (HEK293).

**Molecular Characterization**

This protein carries a polyhistidine tag at the C-terminus

The protein has a calculated MW of 47.3 kDa. The protein migrates as 50-60 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

**Endotoxin**

Less than 1.0 EU per  $\mu\text{g}$  by the LAL method.

**Purity**

>95% as determined by SDS-PAGE.

**Formulation**

Supplied as 0.2  $\mu\text{m}$  filtered solution in 10 mM PB, 150 mM NaCl, pH7.4.

Contact us for customized product form or formulation.

**Shipping**

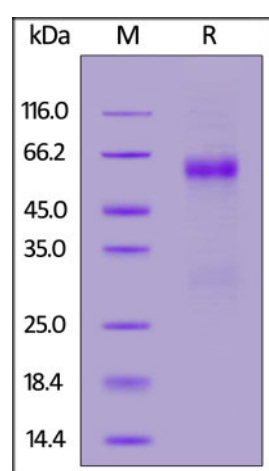
*This product is supplied and shipped with dry ice, please inquire the shipping cost.*

**Storage**

*Please avoid repeated freeze-thaw cycles.*

This product is stable after storage at:

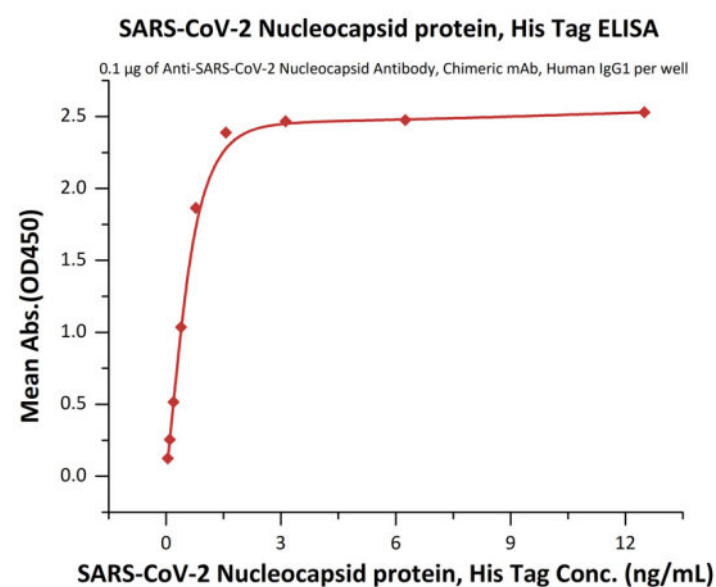
- The product MUST be stored at  $-70^{\circ}\text{C}$  or lower upon receipt;
- $-70^{\circ}\text{C}$  for 3 months under sterile conditions.

**SDS-PAGE**

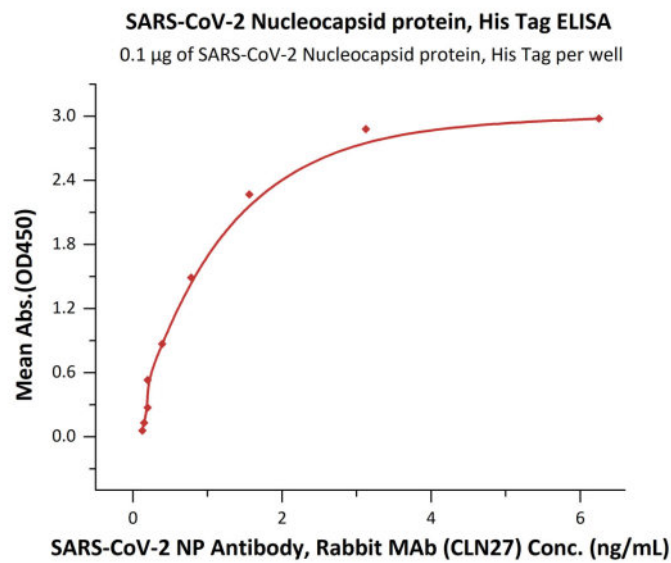
SARS-CoV-2 Nucleocapsid protein, His Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

**Bioactivity-ELISA****Nucleocapsid protein ELISA**

Immobilized SARS-CoV-2 Nucleocapsid protein, His Tag (Cat. No. NUN-C5221) at 1  $\mu\text{g}/\text{mL}$  (100  $\mu\text{L}/\text{well}$ ) can bind Anti-SARS-CoV-2 Nucleocapsid Antibody, Chimeric mAb, Human IgG1 (Cat. No. NUN-CH15) with a linear range of 0.1-3  $\text{ng}/\text{mL}$  (QC tested).



Immobilized Anti-SARS-CoV-2 Nucleocapsid Antibody, Chimeric mAb, Human IgG1 (Cat. No. NUN-CH15) at 1  $\mu\text{g/mL}$  (100  $\mu\text{L/well}$ ) can bind SARS-CoV-2 Nucleocapsid protein, His Tag (Cat. No. NUN-C5221) with a linear range of 0.1-3 ng/mL (QC tested).



Immobilized SARS-CoV-2 Nucleocapsid protein, His Tag (Cat. No. NUN-C5221) at 1  $\mu\text{g/mL}$  (100  $\mu\text{L/well}$ ) can bind SARS-CoV-2 NP Antibody, Rabbit MAb (CLN27) with a linear range of 0.05-2 ng/mL (Routinely tested).

## Background

Nucleocapsid (N) protein is the most abundant protein found in coronavirus. CoV N protein is a highly immunogenic phosphoprotein important for viral genome replication and modulation of cell signaling pathways. It was first identified by a research team while they were screening for ADP-ribosylated proteins during coronavirus (CoV) infection (Grunewald M. E., et al. 2017, *Virology*; 517: 62-68). The array of diverse functional activities accommodated in N protein makes it more than a structural protein but also an interesting target in the development of antiviral therapeutics. Because of the conservation of N protein sequence and its strong immunogenicity, N protein of coronavirus is chosen as a diagnostic tool.

## Clinical and Translational Updates

Please contact us via [TechSupport@acrobiosystems.com](mailto:TechSupport@acrobiosystems.com) if you have any question on this product.