# SARS-CoV-2 Nucleocapsid protein, His Tag (BQ.1/Omicron)

Catalog # NUN-C52Hx

## Synonym

Nucleocapsid protein,NP,Protein N

## Source

SARS-CoV-2 Nucleocapsid protein, His Tag (BQ.1/Omicron) (NUN-C52Hx) is expressed from human 293 cells (HEK293). It contains AA Met 1 - Ala 419 (Accession # QHO62115.1 (P13L, ERS31-33del, E136D, R203K, G204R, S413R)). The mutations are identified on the SARS-CoV-2 Omicron variant (Pango lineage: BQ.1; GISAID clade: GRA).
Predicted N-terminus: Met 1

## Molecular Characterization

This protein carries a polyhistidine tag at the C-terminus.

The protein has a calculated MW of 47.1 kDa. The protein migrates as 55-60 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

## Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

## Purity

>95% as determined by SDS-PAGE.

## Formulation

Lyophilized from 0.22 μm filtered solution in PBS, 0.2 M Arginine, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

## Reconstitution

Please see Certificate of Analysis for specific instructions.

***For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.***

## Storage

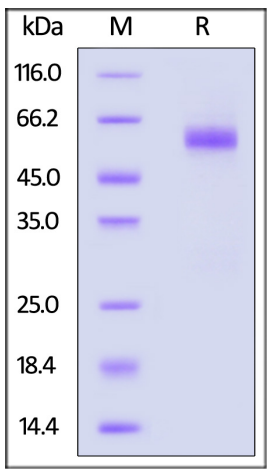
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

***Please avoid repeated freeze-thaw cycles.***

This product is stable after storage at:

- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

## SDS-PAGE




SARS-CoV-2 Nucleocapsid protein, His Tag (BQ.1/Omicron) 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

# SARS-CoV-2 Nucleocapsid protein, His Tag (BQ.1/Omicron)

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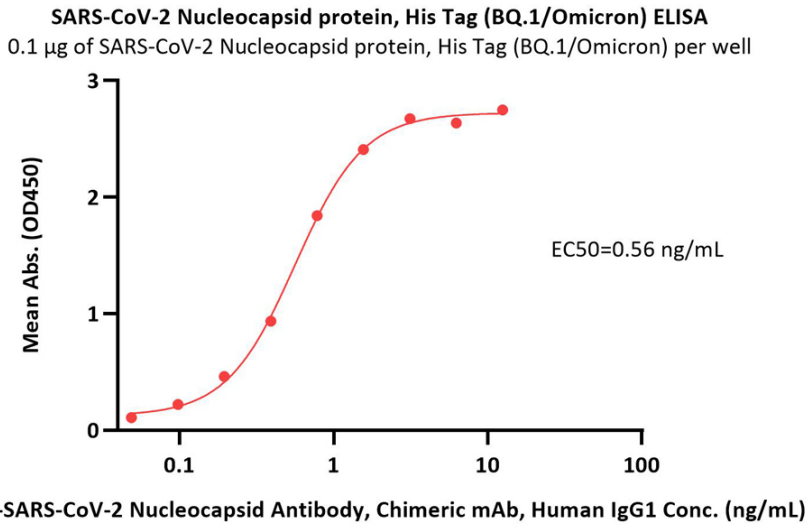
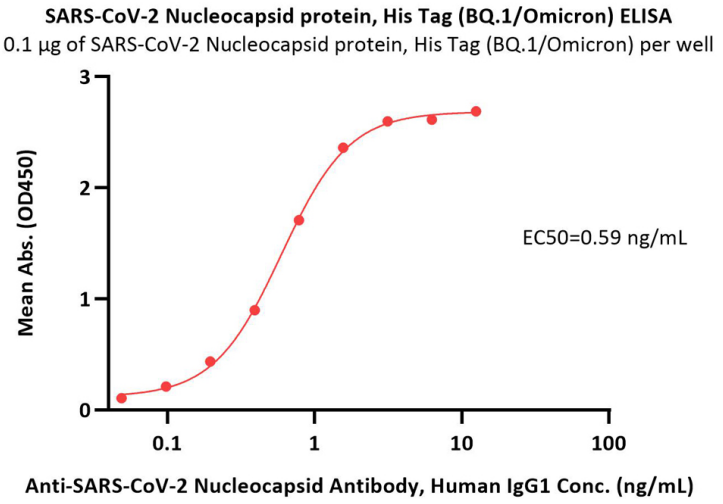



Immobilized SARS-CoV-2 Nucleocapsid protein, His Tag (BQ.1/Omicron) (Cat. No. NUN-C52Hx) at 1 μg/mL (100 μL/well) can bind Anti-SARS-CoV-2 Nucleocapsid Antibody, Chimeric mAb, Human IgG1 (Cat. No. NUN-CH15) with a linear range of 0.1-2 ng/mL (QC tested).




Immobilized SARS-CoV-2 Nucleocapsid protein, His Tag (BQ.1/Omicron) (Cat. No. NUN-C52Hx) at 1 μg/mL (100 μL/well) can bind Anti-SARS-CoV-2 Nucleocapsid Antibody, Human IgG1 (Cat. No. NUN-CH14) with a linear range of 0.1-2 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.