

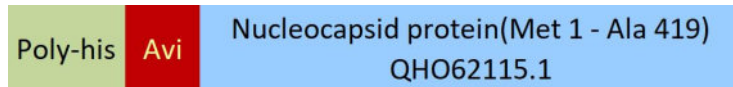
Synonym

Nucleocapsid protein,NP,Protein N

Source

Biotinylated SARS-CoV-2 Nucleocapsid protein, His,Avitag(NUN-C81Q6) is expressed from E.coli cells. It contains AA Met 1 - Ala 419 (Accession # [QHO62115.1](#)).

Predicted N-terminus: Met

Molecular Characterization

This protein carries a polyhistidine tag at the N-terminus, followed by an Avi tag (Avitag™)

The protein has a calculated MW of 51.1 kDa. The protein migrates as 52 kDa under reducing (R) condition (SDS-PAGE).

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

Passed as determined by the HABA assay / binding ELISA.

Endotoxin

Less than 1.0 EU per µg by the LAL method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 150 mM NaCl, Arginine, pH7.5 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.

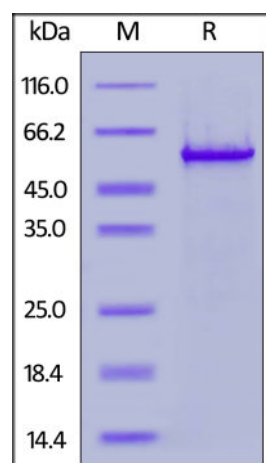
Storage

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:

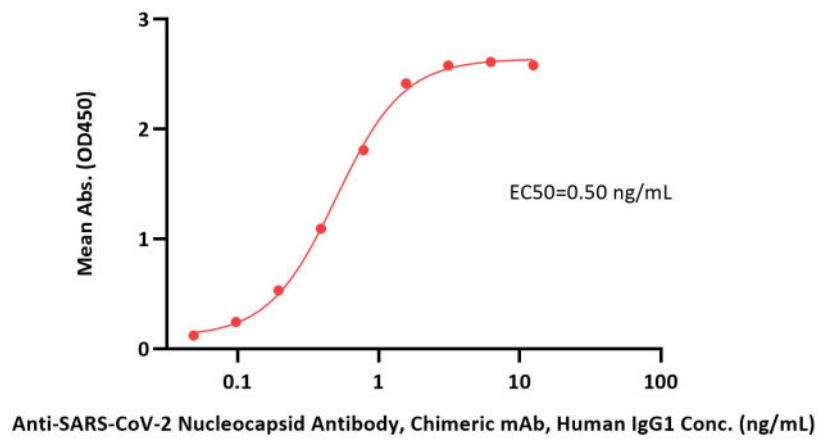
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

Biotinylated SARS-CoV-2 Nucleocapsid protein, His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90%.

Bioactivity-ELISA

Biotinylated SARS-CoV-2 Nucleocapsid protein, His,Avitag ELISA
0.1 µg of Biotinylated SARS-CoV-2 Nucleocapsid protein, His,Avitag per well



Immobilized Biotinylated SARS-CoV-2 Nucleocapsid protein, His,Avitag (Cat. No. NUN-C81Q6) at 1 µg/mL (100 µL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 µg/well) plate 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).

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 if you have any question on this product.