Anti-SARS-CoV-2 Nucleocapsid Antibody, Human IgG1 (AS41)

Catalog # NUN-S41

Source

Anti-SARS-CoV-2 Nucleocapsid Antibody, Human IgG1 (AS41) (NUN-S41) is isolated from a SARS-CoV-2 infected patient and is recombinantly produced from human 293 cells (HEK293). As verified by binding test with N-NTD (Cat. No. NUN-C5143) and N-CTD (Cat. No. NUN-C5145) protein, this antibody can only bind to N-CTD (AA Ser 255 - Pro 364). ELISA test validated that this antibody can bind multiple N protein variants (Cat. No. NUN-C52H8, NUN-C52Hc, NUN-C52Hd) with similar affinity as compared to the wild type N protein (Cat. No. NUN-C5227).

Clone

AS41

Isotype

Human IgG1 | Kappa

Antibody Type

Recombinant Monoclonal

Reactivity

Virus

Specificity

This product can recognize SARS-CoV-2 and SARS-CoV Nucleocapsid protein. No cross-reactivity is detected with nucleocapsid protein of other coronaviruses, including MERS-CoV, HCoV-229E, HCoV-NL63, HCoV-OC43 and HCoV-HKU1.

Application

Application	Recommended Usage
ELISA	0.1-10 ng/mL

Purity

>95% as determined by SDS-PAGE.

Purification

Protein A purified/ Protein G purified

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, 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

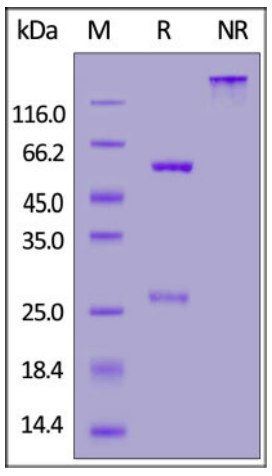
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

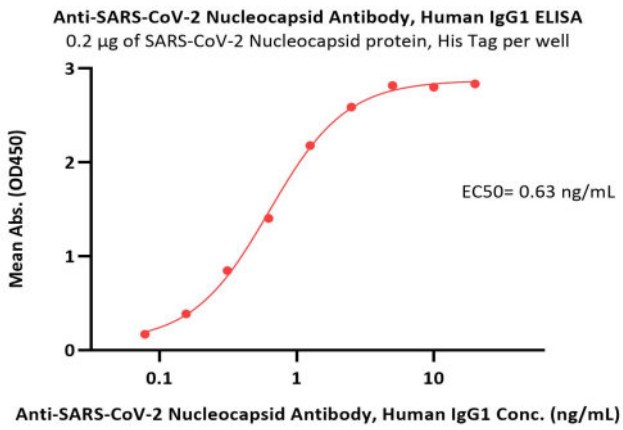
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 3 months under sterile conditions after reconstitution.

SDS-PAGE

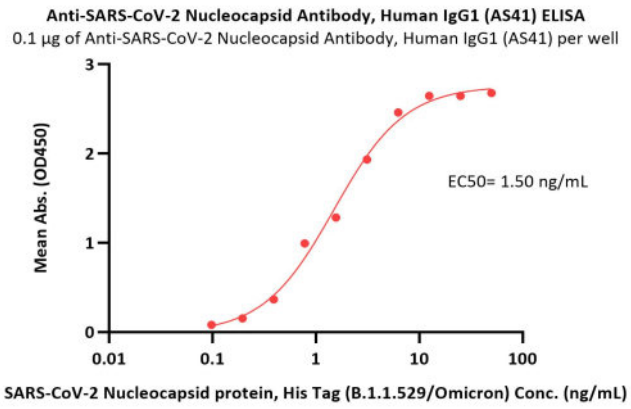


Anti-SARS-CoV-2 Nucleocapsid Antibody, Human IgG1 (AS41) on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA



Immobilized SARS-CoV-2 Nucleocapsid protein, His Tag (Cat. No. NUN-C5227) at 2 μg/mL (100 μL/well) can bind Anti-SARS-CoV-2 Nucleocapsid Antibody, Human IgG1 (AS41) (Cat. No. NUN-S41) with a linear range of 0.08-1 ng/mL (QC tested).



Immobilized Anti-SARS-CoV-2 Nucleocapsid Antibody, Human IgG1 (AS41) (Cat. No. NUN-S41) at 1 μg/mL (100 μL/well) can bind SARS-CoV-2 Nucleocapsid protein, His Tag (B.1.1.529/Omicron) (Cat. No. NUN-C52Ht) with a linear range of 0.1-3 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