

Source

Anti-SARS-CoV-2 Nucleocapsid Antibody, Chimeric mAb, Human IgG1 (AM223) is a chimeric monoclonal antibody recombinantly expressed from HEK293 cells, which combines the variable region of a mouse monoclonal antibody with human IgG1 constant domain. The mouse monoclonal antibody was obtained from a mouse immunized with recombinant SARS-CoV-2 Nucleocapsid Protein. This chimeric antibody is purified by Protein A affinity chromatography. 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 potentially recognize the N protein variant with mutation located within CTD (Cat. No. NUN-C52H9). It can also bind multiple N protein variants with similar affinity as compared to the wild type N protein (Cat. No. NUN-C5227).

Isotype

Human IgG1/kappa

Specificity

This product can recognize SARS-CoV-2 Nucleocapsid protein. Cross-reactivity with Nucleocapsid protein of other coronaviruses has not been tested.

Application

This antibody can be paired with other Anti-SARS-CoV-2 nucleocapsid antibodies to detect SARS-CoV-2 nucleocapsid protein in sandwich ELISA or LFA assay.

Purity

>95% as determined by SDS-PAGE.

>90% as determined by SEC-MALS.

Formulation

Supplied as 0.2 μm filtered solution in PBS, pH7.4.

Contact us for customized product form or formulation.

Storage

Please avoid repeated freeze-thaw cycles.

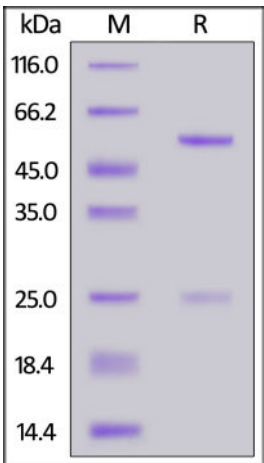
This product is stable after storage at:

- For long term storage, the product is stable for up to 3 years at -70°C from date of receipt;
- For short term storage, the product is stable for up to 12 months at 2-8°C from date of receipt.

Shipping

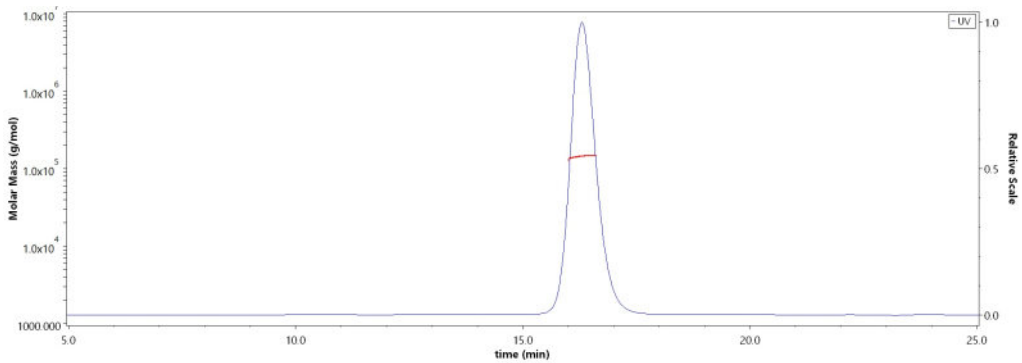
This product is supplied and shipped as sterile liquid solution with blue ice, please inquire the shipping cost.

SDS-PAGE



Anti-SARS-CoV-2 Nucleocapsid Antibody, Chimeric mAb, Human IgG1 (AM223) on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

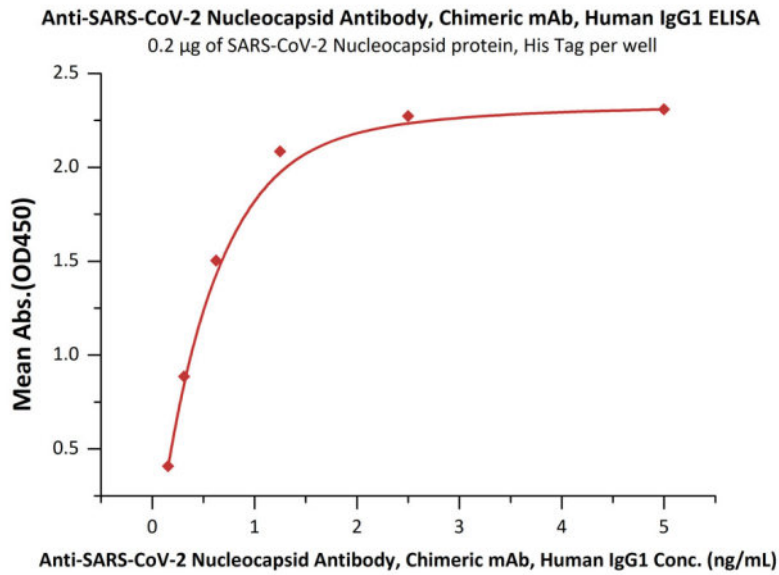
SEC-MALS



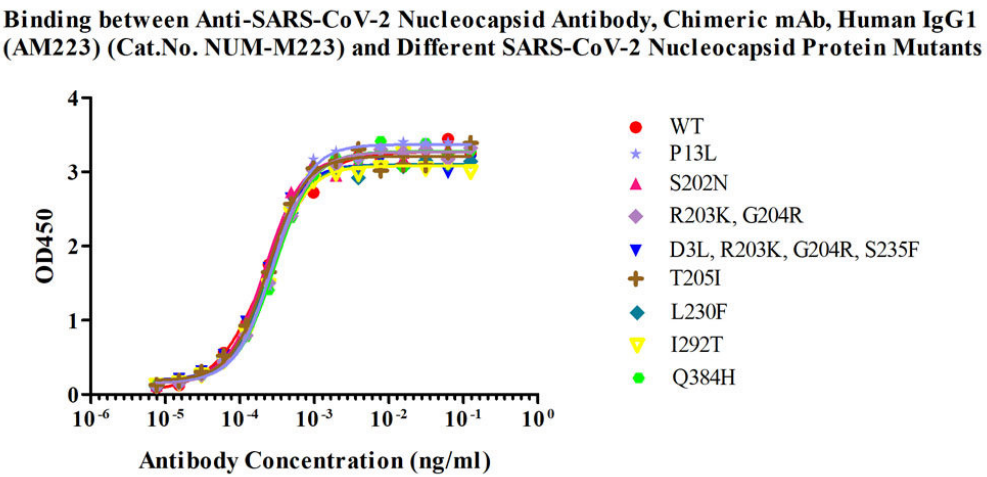
The purity of Anti-SARS-CoV-2 Nucleocapsid Antibody, Chimeric mAb, Human IgG1 (AM223) (Cat. No. NUN-M223) was more than 90% and the molecular weight of this protein is around 135-150 kDa verified by SEC-MALS.

[Report](#)

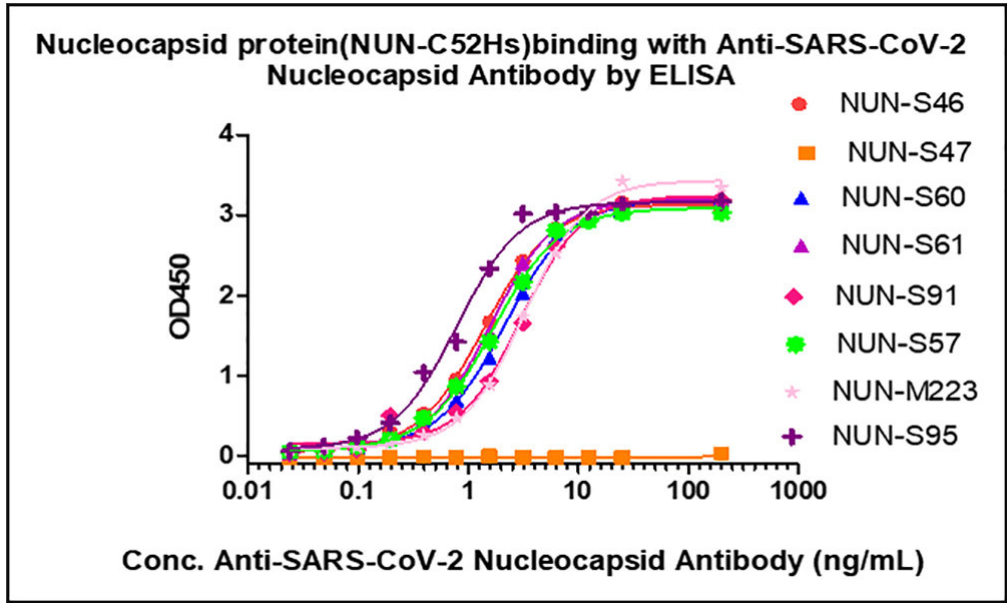
Bioactivity-ELISA



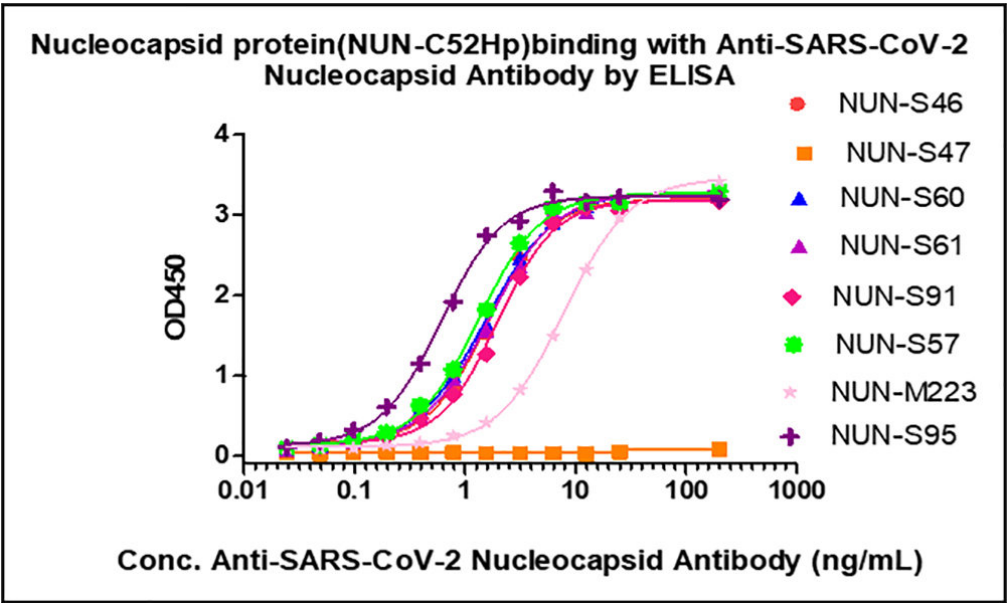
Immobilized SARS-CoV-2 Nucleocapsid protein, His Tag (Cat. No. NUN-C5227) at 2 µg/mL (100 µL/well) can bind Anti-SARS-CoV-2 Nucleocapsid Antibody, Chimeric mAb, Human IgG1 (Cat. No. NUN-M223) with a linear range of 0.2-1 ng/mL (QC tested).



Anti-SARS-CoV-2 Nucleocapsid Antibody, Chimeric mAb, Human IgG1 (AM223) (Cat. No. NUN-M223) (Capture antibody) can bind multiple nucleocapsid protein variants with high affinity comparable with the WT N protein (Cat. No. NUN-C5227).



Anti-SARS-CoV-2 Nucleocapsid Antibody (Cat. No. NUN-M223) can bind the Delta variant of nucleocapsid protein (Cat. No. NUN-C52Hs).



Anti-SARS-CoV-2 Nucleocapsid Antibody (Cat. No. NUN-M223) can bind the Delta variant of nucleocapsid protein (Cat. No. NUN-C52Hp).

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.