Datasheet for ABIN6952658

SARS-CoV-2 Nucleocapsid Protein (SARS-CoV-2 N) (His tag,AVI tag,Biotin)

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Overview

Quantity:	200 µg
Target:	SARS-CoV-2 Nucleocapsid (SARS-CoV-2 N)
Origin:	SARS Coronavirus-2 (SARS-CoV-2)
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SARS-CoV-2 Nucleocapsid protein is labelled with His tag,AVI tag,Biotin.
Application:	ELISA, SDS-PAGE (SDS)

Product Details

Purpose:	Biotinylated SARS-CoV-2 (COVID-19) Nucleocapsid protein, His,Avitag™
Sequence:	AA 1-419
Specificity:	Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.
Characteristics:	Biotinylated SARS-CoV-2 Nucleocapsid protein, His,Avitag is expressed from E.coli cells. It contains AA Met 1 - Ala 419 (Accession # QHO62115.1). Predicted N-terminus: Met This protein carries a polyhistidine tag at the N-terminus, followed by an Avi tag (Avitag™).
Purity:	>90 % as determined by SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 1.0 EU per µg by the LAL method.

Target Details

Target:	SARS-CoV-2 Nucleocapsid (SARS-CoV-2 N)
Alternative Name:	SARS-CoV-2 Nucleocapsid Protein (SARS-CoV-2 N Products)
Target Type:	Viral Protein
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.
Molecular Weight:	51.1 kDa

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Comment:	Ready-to-use AvitagTM biotinylated protein: The product is exclusively produced using the AvitagTM technology. Briefly, a unique 15 amino acid peptide, the Avi tag, is introduced into the recombinant protein during expression vector construction. The single lysine residue in the Avi tag is enzymatically biotinylated by the E. Coli biotin ligase BirA. This single-point enzymatic labeling technique brings many advantages for commonly used binding assays. The biotinylation happens on the lysine residue of Avi tag, and therefore does NOT interfere with the target protein's natural binding activities. In addition, when immobilized on an avidin-coated surface, the protein orientation is uniform because the position of the Avi tag in the protein is precisely controlled.
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Buffer:	50 mM Tris, 150 mM NaCl, Arginine, pH 7.5
Handling Advice:	Please avoid repeated freeze-thaw cycles.

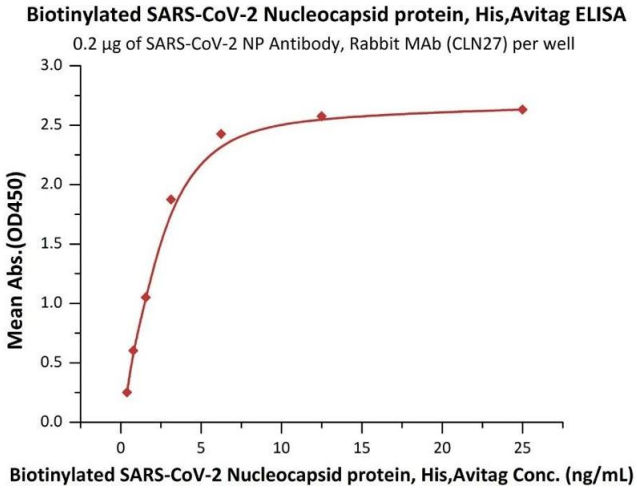
Handling

Storage:	4 °C,-20 °C,-80 °C
Storage Comment:	For long term storage, the product should be stored at lyophilized state at -20°C or lower. This product is stable after storage at: 4-8°C for 12 months in lyophilized state, -70°C for 3 years under sterile conditions after reconstitution.

Publications

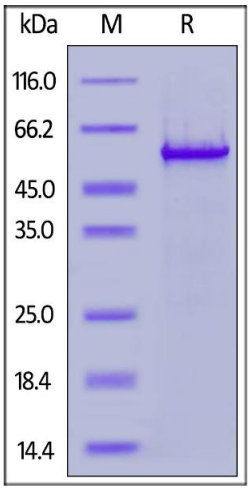
Product cited in:	Dogan, Kozhaya, Placek, Gunter, Yigit, Hardy, Plassmeyer, Coatney, Lillard, Bukhari, Kleinberg, Hayes, Arditi, Klapper, Merin, Liang, Gupta, Alpan, Unutmaz: "SARS-CoV-2 specific antibody and neutralization assays reveal the wide range of the humoral immune response to virus." in: **Communications biology**, Vol. 4, Issue 1, pp. 129, (2021) (PubMed).

Images



ELISA

Image 1. Immobilized SARS-CoV-2 NP Antibody, Rabbit MAb (CLN27) at 2 μg/mL (100 μL/well) can bind Biotinylated SARS-CoV-2 Nucleocapsid protein, His,Avitag (ABIN6952635) with a linear range of 0.4-3 ng/mL (QC tested).



SDS-PAGE

Image 2. 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 % .