Datasheet for ABIN6953059

Recombinant anti-SARS-CoV-2 Nucleocapsid antibody

2 Images | 3 Publications

Go to Product page

Overview

Quantity:	200 µg
Target:	SARS-CoV-2 Nucleocapsid (SARS-CoV-2 N)
Reactivity:	SARS Coronavirus-2 (SARS-CoV-2), SARS Coronavirus (SARS-CoV)
Host:	Rabbit
Antibody Type:	Recombinant Antibody
Clonality:	Chimeric
Conjugate:	This SARS-CoV-2 Nucleocapsid antibody is un-conjugated
Application:	ELISA, Immunofluorescence (IF)

Product Details

Immunogen:	The original antibody was generated by cloning the variable regions of the scFvs selected from phage display libraries into separate vectors for IgG1 heavy-chain and light-chain expression. The harvested supernatents were then purified on protein A columns. The original immunogen was the whole irradiated virion.
Clone:	CR3018 (03-018)
Isotype:	IgG kappa
Specificity:	This antibody binds the amino acid residues between 11-19 of the N protein of the SARS CoV as well as SARS-CoV-2 (COVID-19) nucleocapsid protein.
Characteristics:	OriginalSpeciesName: Human OriginalFormat: IgG1
Purification:	Protein A affinity purified

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:	NP, NC, Protein N, Nucleocapsid protein, SARS-CoV Protein N, SARS-CoV Nucleocapsid protein, SARS Coronavirus, SARS-CoV-2, SARS CoV 2, 2019-nCoV
UniProt:	P0DTC9, P59595

Application Details

Application Notes:	This antibody is recommended for detection of SARS CoV2 protein N (nucleoprotein). This antibody binds both the nucleocapsid protein of the SARS-CoV and SARS CoV-2 (2019-nCoV). Initial characterization of the antibody for binding to 2019-nCoV was done using ELISA. This antibody shows potential to be used for development of diagnostic assays. Various isotype versions of the antibody namely human IgG1, IgG3, IgM, IgA and the less common IgG2 and IgG4 are available for the investigation of their role in response to SARS CoV2. Competitive ELISA of this antibody with CR3009 suggests that both these antibodies bind different epitopes of the N protein of SARS CoV. Thus, a combination of these two antibodies is suggested for virus capture assays. Immunofluorescence staining was used to demonstrate binding of CR3018 to SARS-CoV infected Vero cells. Competitive ELISA of both anti-nucleocapsid antibodies suggests that they bind different, non-overlapping epitopes of the N protein of SARS-CoV. Thus, a combination of these two antibodies is suggested for virus capture assays. Clone CR3018 binds the amino acid residues between 11-19 of the N protein of SARS-CoV, while clone CR3009 binds a non-linear/conformational epitope of the N protein of SARS-CoV, both of which are sufficiently conserved to permit binding of these antibodies to SARS-CoV-2.
Comment:	This chimeric rabbit antibody was made using the variable domain sequences of the original Human IgG1 format, for improved compatibility with existing reagents, assays and techniques.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1 mg/mL

Handling

Buffer:	PBS with 0.02 % Proclin 300.
Preservative:	ProClin
Precaution of Use:	This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

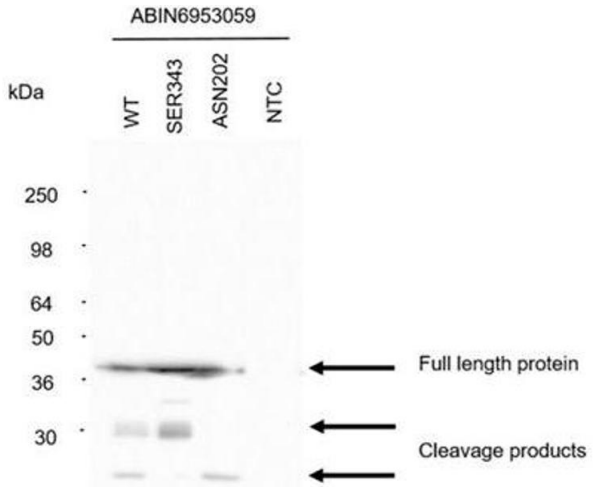
Publications

Product cited in:

Gaynor, Vaysburd, Harman, Albecka, Jeffrey, Beswick, Papa, Chen, Mallery, McGuinness, Van Rietschoten, Stanway, Brear, Lulla, Ciazynska, Chang, Sharp, Neary, Box, Herriott, Kijak, Tatham, Bentley et al.: "Multivalent bicyclic peptides are an effective antiviral modality that can potently inhibit SARS-CoV-2. ..." in: **Nature communications**, Vol. 14, Issue 1, pp. 3583, (2023) (PubMed).

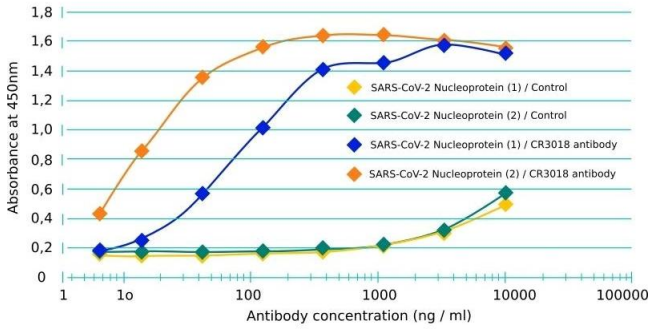
Ramm, Dondapati, Trinh, Wenzel, Walter, Zemella, Kubick: "The Potential of Eukaryotic Cell-Free Systems as a Rapid Response to Novel Zoonotic Pathogens: Analysis of SARS-CoV-2 Viral Proteins." in: **Frontiers in bioengineering and biotechnology**, Vol. 10, pp. 896751, (2022) (PubMed).

van den Brink, Ter Meulen, Cox, Jongeneelen, Thijsse, Throsby, Marissen, Rood, Bakker, Gelderblom, Martina, Osterhaus, Preiser, Doerr, de Kruif, Goudsmit: "Molecular and biological characterization of human monoclonal antibodies binding to the spike and nucleocapsid proteins of severe acute respiratory syndrome coronavirus." in: **Journal of virology**, Vol. 79, Issue 3, pp. 1635-44, (2005) (PubMed).



Western Blotting

Image 1. Detection of N protein. The nucleocapsid WT protein as well as both mutants (SER343 and ASN202) were synthesized in a CHO cell-free system. Detection of cell-free synthesized nucleocapsid protein in a Western Blot. Source: PMID35519622



ELISA

Image 2. Binding curve of anti-SARS-Cov-2 (COVID-19) & SARS-CoV Nucleoprotein antibody CR3018 (03-018) to different SARS-CoV-2 Nucleoproteins. ELISA Plate coated with two different SARS-CoV-2 Nucleoproteins (1,2) at a concentration of 5 µg/mL. A 3-fold serial dilution from 10,000 ng/mL was performed using ABIN6953059. For detection, a 1:4000 dilution of HRP-labelled anti-rabbit antibody was used. Rabbit anti-Fluorescein [4-4-20 (enhanced)] antibody (ABIN5668035) was used as a control.