Product Datasheet

SARS-CoV-2 Spike Antibody (CR3022) - Chimeric - Azide and BSA Free

NBP2-90979

Unit Size: 0.2 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

Publications: 2

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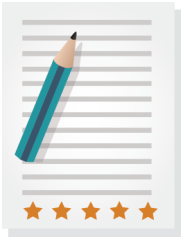
Updated 10/19/2023 v.20.1



NBP2-90979

SARS-CoV-2 Spike Antibody (CR3022) - Chimeric - Azide and BSA Free

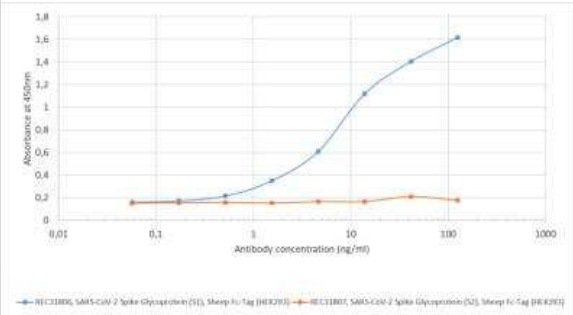
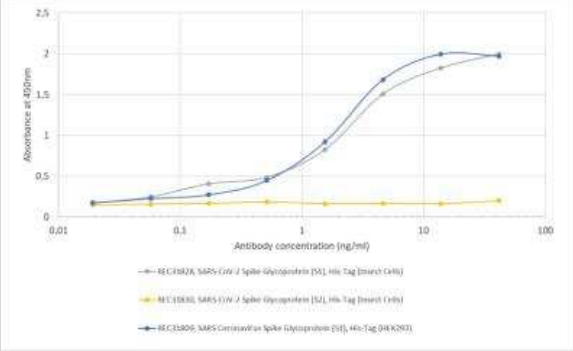
Product Information	
Unit Size	0.2 mg
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	CR3022
Preservative	0.02% Proclin 300
Isotype	IgG Kappa
Purity	Protein A purified
Buffer	PBS

Product Description	
Host	Rabbit
Gene ID	43740568
Gene Symbol	S
Species	SARS-CoV-2, SARS-CoV
Specificity/Sensitivity	This antibody binds to both SARS-CoV and SARS-CoV-2 with high affinity (PMID: 16796401 & 32065055). It binds the amino acids 318-510 in the S1 domain of the SARS-CoV Spike protein as well as SARS-CoV-2 (COVID-19) Spike protein. The antibody also binds to P462L-substituted S318-510 fragments of the SARS spike protein. The binding epitope is only accessible in the "open" confromation of the spike protein (Joyce et al. 2020). NBP2-90979 cross-reacts with spike protein of Omicron and Delta variants.
Immunogen	The original monoclonal antibody was generated through an scFv library derived from a peripheral blood lymphocytes of a patient exposed to the SARS-CoV.

Product Application Details	
Applications	ELISA, Immunocytochemistry/Immunofluorescence, Neutralization, Surface Plasmon Resonance
Recommended Dilutions	ELISA, Immunocytochemistry/Immunofluorescence, Surface Plasmon Resonance, Neutralization

Application Notes	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. The initial characterization of the binding of this antibody was performed by ELISA and indicates potential for the development of diagnostic assays, as both virus-capture assays, or as controls in serological assays measuring immune-responses to virus exposure. Human IgG1, IgG3, IgM and IgA isotypes are available to mimic antibody responses seen in COVID19 (Amanat et al. 2020). Human IgG2 is available to assess its yet unknown role in the response to SARS-CoV-2. The original human IgG1 version of the antibody works synergistically in combination with another non-competing SARS antibody CR3014 and is a potential candidate for passive immune prophylaxis of SARS-CoV infection (Meulen et al., 2006). The original antibody (human IgG1) was also reported to bind the 2019-nCoV RBD (KD of 6.3 nM). This antibody has been attributed a potential to be developed as a therapeutic agent, alone or in combination with other neutralizing antibodies for treatment of 2019-nCoV infections (Tian et al., 2020).

Images

ELISA: SARS-CoV-2 Spike Antibody (CR3022) [NBP2-90979] - Binding curve of SARS-CoV-2 Spike Antibody (CR3022) to SARS-CoV-2 Spike Glycoprotein (S1), Sheep Fc-Tag and SARS-CoV-2 Spike Glycoprotein (S2), Sheep Fc-Tag from HEK293 cells. ELISA plate coated with SARS-CoV-2 Spike Glycoprotein (S1), Sheep Fc-Tag (blue line) or SARS-CoV-2 Spike Glycoprotein (S2), Sheep Fc-Tag (orange line) from HEK293 cells (Native Antigen) at concentrations of 5 ug/ml. A 3-fold serial dilution from 125 ng/ml was performed using SARS-CoV-2 Spike Antibody (CR3022) . For detection, a 1:4000 dilution of HRP-labelled anti-human IgG antibody was used.	
ELISA: SARS-CoV-2 Spike Antibody (CR3022) [NBP2-90979] - Binding curve of SARS-CoV-2 Spike Antibody (CR3022) to SARS-CoV-2 Spike Glycoprotein domains S1 and S2 of various origin. ELISA plate coated with SARS-CoV-2 Spike Glycoprotein (S1), His-Tag (Insect Cells; grey line), SARS-CoV-2 Spike Glycoprotein (S2), His-Tag (Insect Cells; yellow line) and SARS Coronavirus Spike Glycoprotein (S1), His-Tag (HEK293 cells; blue line) (Native Antigen) at concentrations of 5 ug/ml. A 3-fold serial dilution from 41.6 ng/ml was performed using SARS-CoV-2 Spike Antibody (CR3022). For detection, a 1:4000 dilution of HRP-labelled anti-human IgG antibody was used.	

Publications

Gagne M, Moliva JI, Foulds KE Et al. mRNA-1273 or mRNA-Omicron boost in vaccinated macaques elicits similar B cell expansion, neutralizing responses, and protection from Omicron Cell 2022-04-21 [PMID: 35447072]

Details:
Citation using the Biotin version of this antibody.

Gagne M, Corbett KS, Flynn BJ Et al. Protection from SARS-CoV-2 Delta one year after mRNA-1273 vaccination in rhesus macaques coincides with anamnestic antibody response in the lung Cell 2021-12-18 [PMID: 34921774]

Details:
Citation using the Biotin version of this antibody.

Novus Biologicals USA
10730 E. Briarwood Avenue
Centennial, CO 80112
USA
Phone: 303.730.1950
Toll Free: 1.888.506.6887
Fax: 303.730.1966
nb-customerservice@bio-techne.com

Bio-Techne Canada
21 Canmotor Ave
Toronto, ON M8Z 4E6
Canada
Phone: 905.827.6400
Toll Free: 855.668.8722
Fax: 905.827.6402
canada.inquires@bio-techne.com

Bio-Techne Ltd
19 Barton Lane
Abingdon Science Park
Abingdon, OX14 3NB, United Kingdom
Phone: (44) (0) 1235 529449
Free Phone: 0800 37 34 15
Fax: (44) (0) 1235 533420
info.EMEA@bio-techne.com

General Contact Information
www.novusbio.com
Technical Support: nb-technical@bio-techne.com
Orders: nb-customerservice@bio-techne.com
General: novus@novusbio.com

Products Related to NBP2-90979

HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP3-14666-100ug	SARS-CoV-2 Spike Recombinant Protein
10549-CV-100	SARS-CoV-2 Spike [Unconjugated]

Limitations
This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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