

Rabbit SARS-CoV-2 (2019-nCoV) Spike Neutralizing Monoclonal Antibody | anti-SARS-CoV-2 antibody

SARS-CoV-2 (2019-nCoV) Spike Neutralizing Antibody, Rabbit Mab

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA257795	Rabbit	SARS-CoV-2	Neutralization Assay, Flow Cytometry, Functional Assay, ELISA

PRODUCT SYNONYMS

SARS-CoV-2 (2019-nCoV) Spike Neutralizing; Monoclonal Antibody; SARS-CoV-2 (2019-nCoV) Spike Neutralizing Antibody; Rabbit Mab; anti-SARS-CoV-2 antibody

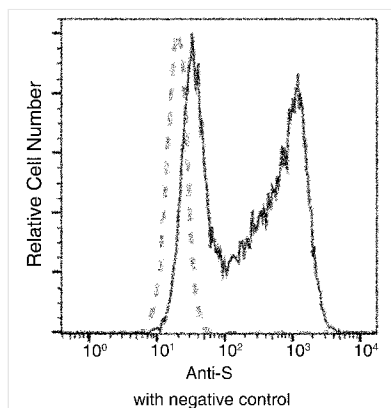
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	SARS-CoV-2
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Number	118
Specificity	SARS-CoV-2 (2019-nCoV) Spike RBD Protein
Purity/Purification	Protein A
Form/Format	Liquid. 0.22um filtered solution in Histidine and Arginine buffer containing 120mM NaCl, 0.02% Tween 80
Applicable Applications for anti-SARS-CoV-2 antibody	NTRL (Neutralization Assay), FCM/FACS (Flow Cytometry), ELISA
Immunogen	Recombinant SARS-CoV-2 (2019-nCoV) Spike RBD-mFc Protein
Endotoxin	<3EU/mg
Conjugation	Unconjugated
Preparation	This product is a recombinant monoclonal antibody expressed from HEK293 cells.
Cross-reactivity	Has cross-reactivity in ELISA with SARS-CoV-2 (2019-nCoV) Spike S1+S2 ECD Protein No cross-reactivity in ELISA with SARS-CoV (Isolate Tor2) Spike S1+S2 ECD Protein MERS-CoV Spike S1+S2 ECD Protein HCoV-NL63 Spike S1+S2 ECD Protein HCoV-229E Spike S1+S2 ECD Protein HCoV-HKU1 (isolate N5) Spike S1+S2 ECD Protein HCoV-OC43 Spike S1+S2 ECD Protein
Notes	Microneutralization (MN): The neutralization activity is Measured by microneutralization assay in vitro. The virus microneutralization (MN) test was performed on 293T-ACE2 cells infected with SARS-CoV-2 (2019-nCoV) Spike Pseudovirus under treatment of serial dilutions of neutralizing antibody. The infection was neutralized by increasing concentrations of Anti-SARS-CoV-2 Neutralizing Antibody. Rate of inhibition was determined by comparing the Relative Light Unit (RLU) of Luciferase reporter in different antibody concentrations. The IC50 is typically 0.305ug/mL.

Preparation and Storage

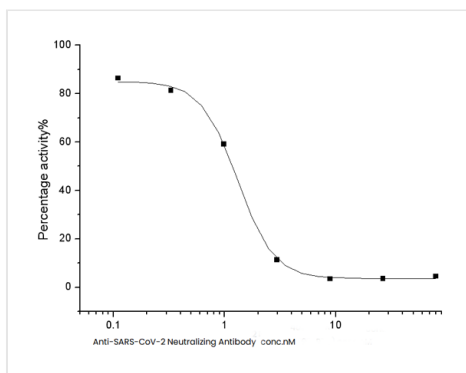
This antibody can be stored at 2-8 degree C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 degree C to -80 degree C. Preservative-Free. Avoid repeated freeze-thaw cycles. This antibody is shipped as liquid solution at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

IMAGES



FCM/FACS (Flow Cytometry)

Flow cytometric analysis of SARS-CoV-2 Spike overexpressed HEK293 Cells were stained with purified anti-SARS-CoV-2 Spike Neutralizing Rabbit MAbs, then a FITC-conjugated second step antibody. The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.



ELISA

Serial dilutions of Anti-SARS-CoV-2 Neutralizing Antibody was detected by SARS-CoV-2 (2019-nCoV) Inhibitor Screening ELISA Kit. The IC50 is typically 0.5-5 nM.

Conc. (µg/mL)	Inhibition%
100	99.98%
20	99.98%
4	98.93%
0.8	84.89%
0.16	26.57%
0.032	15.73%
0.0064	10.88%
0.00128	16.94%

Application Data

The neutralization activity is Measured by microneutralization assay in vitro. The virus microneutralization (MN) test was performed on 293T-ACE2 cells infected with SARS-CoV-2 (2019-nCoV) Spike Pseudovirus under treatment of serial dilutions of neutralizing antibody. The infection was neutralized by increasing concentrations of Anti-SARS-CoV-2 Neutralizing Antibody. Rate of inhibition was determined by comparing the Relative Light Unit (RLU) of Luciferase reporter in different antibody concentrations. The IC50 is typically 0.185 µg/mL.

ADDITIONAL INFORMATION

Related Product Information for anti-SARS-CoV-2 antibody

Background: The spike (S) glycoprotein of coronaviruses contains protrusions that will only bind to certain receptors on the host cell. Known receptors bind S1 are ACE2, angiotensin-converting enzyme 2; DPP4, dipeptidyl peptidase-4; APN, aminopeptidase N; CEACAM, carcinoembryonic antigen-related cell adhesion molecule 1; Sia, sialic acid; O-ac Sia, O-acetylated sialic acid. The spike is essential for both host specificity and viral infectivity. The term 'peplomer' is typically used to refer to a grouping of heterologous proteins on the virus surface that function together. The spike (S) glycoprotein of coronaviruses is known to be essential in the binding of the virus to the host cell at the advent of the infection process. It's been reported that SARS-CoV-2 (COVID-19 coronavirus, 2019-nCoV) can infect the human respiratory epithelial cells through interaction with the human ACE2 receptor. The spike protein is a large type I transmembrane protein containing two subunits, S1 and S2. S1 mainly contains a receptor binding domain (RBD), which is responsible for recognizing the cell surface receptor. S2 contains basic elements needed for the membrane fusion. The S protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity. The main functions for the Spike protein are summarized as: Mediate receptor binding and membrane fusion; Defines the range of the hosts and specificity of the virus; Main component to bind with the neutralizing antibody; Key target for vaccine design; Can be transmitted between different hosts through gene recombination or mutation of the receptor binding domain (RBD), leading to a higher mortality rate.

References

Shen S, et al. (2007) Expression, glycosylation, and modification of the spike (S) glycoprotein of SARS CoV. *Methods Mol Biol.* 379: 127-35. Du L, et al. (2009) The spike protein of SARS-CoV--a target for vaccine and therapeutic development. *Nat Rev Microbiol.* 7 (3): 226-36. Xiao X, et al. (2004) The SARS-CoV S glycoprotein. *Cell Mol Life Sci.* 61 (19-20): 2428-30.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/monoclonal/sars-cov-2-2019-ncov-spike-neutralizing-antibody-clone-118-neutralization-assay-flow-cytometry-elisa/257795>