

COVID 19 Omicron (BA.4/BA.5/BA.2.75) Spike RBD Specific Coronavirus Recombinant Antibody | COVID-19 recombinant antibody

SARS-CoV-2 Omicron (BA.4/BA.5/BA.2.75) Spike RBD Specific Antibody, Chimeric MAb

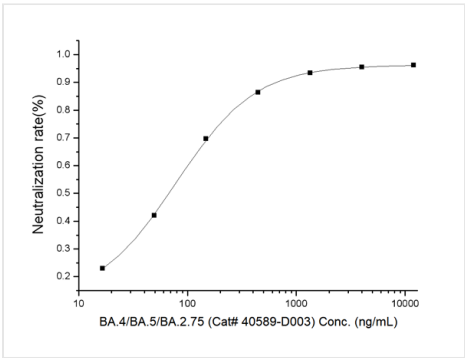
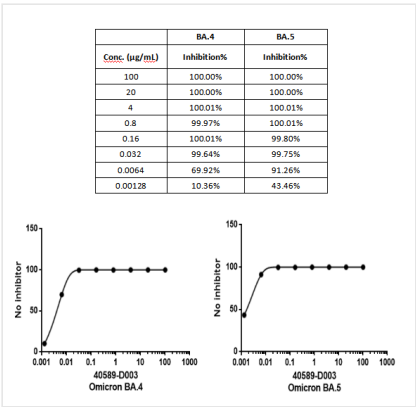
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA258681	Chimera	SARS-CoV-2	Neutralization Assay, ELISA

PRODUCT SYNONYMS

COVID 19 Omicron (BA.4/BA.5/BA.2.75) Spike RBD Specific Coronavirus; Monoclonal Recombinant Antibody; SARS-CoV-2 Omicron (BA.4/BA.5/BA.2.75) Spike RBD Specific Antibody; Chimeric MAb; 2019 Novel Coronavirus; Coronavirus; CoV; COVID-19 virus; HCoV-2; Human Coronavirus 2019; SARS2; SARS-CoV-2; Severe acute respiratory syndrome coronavirus 2; Omicron (BA.4/BA.5/BA.2.75) Spike RBD Specific; COVID-19 recombinant antibody

PRODUCT SPECIFICATIONS

Host	Chimera
Reactivity	SARS-CoV-2
Clonality	Monoclonal
Clone Number	D003
Specificity	Specifically recognize the SARS-CoV-2 Omicron BA.4/BA.5 Spike RBD and ECD (Can block the binding between RBD and ACE2). No cross-reactivity with SARS-CoV-2 wild type, Alpha, Beta, Delta variant. Has Medium cross-reactivity in ELISA with SARS-CoV-2 Omicron BA.2.75 Spike RBD.
Applicable Applications for COVID-19 recombinant antibody	NTRL (Neutralization Assay), ELISA
Preparation	It is a chimeric monoclonal antibody combining the constant domains of the human IgG1 molecule with mouse variable regions. The variable region was obtained from a mouse immunized with purified, recombinant SARS-CoV-2 Omicron BA.4/BA.5 Spike ECD Protein. The antibody was produced using recombinant antibody technology.
Cross-reactivity in ELISA	Has cross-reactivity in ELISA with SARS-CoV-2 BQ.1.1 (Omicron) Spike S1+S2 trimer Protein SARS-CoV-2 BQ.1.1 (Omicron) Spike RBD Protein SARS-CoV-2 BF.7 (Omicron) Spike S1+S2 trimer Protein SARS-CoV-2 BA.4.6/BF.7 (Omicron) Spike RBD Protein SARS-CoV-2 (BA.4.6) Spike S1+S2 trimer Protein SARS-CoV-2 (BA.2.75) Spike RBD Protein SARS-CoV-2 (BA.2.75) Spike S1+S2 trimer Protein SARS-CoV-2 BA.2.75.2 (Omicron) Spike RBD Protein SARS-CoV-2 BA.2.75.2 (Omicron) Spike S1+S2 trimer Protein SARS-CoV-2 Omicron (BA.2.75) Spike S1+S2 trimer Protein SARS-CoV-2 Omicron (BA.4) Spike S1+S2 trimer Protein SARS-CoV-2 Omicron (BA.4/BA.5) Spike RBD Protein Has Medium cross-reactivity in ELISA with SARS-CoV-2 Omicron (BA.2.75) Spike RBD Protein
No cross-reactivity in ELISA	No cross-reactivity in ELISA with SARS-CoV-2 XBB (Omicron) Spike RBD Protein SARS-CoV-2 (BA.2.3.20) Spike RBD Protein SARS-CoV-2 Spike S1+S2 (D614G) trimer Protein SARS-CoV-2 Spike RBD Protein SARS-CoV-2 Alpha (B.1.1.7) Spike S1+S2 trimer Protein SARS-CoV-2 Alpha (B.1.1.7) Spike RBD Protein SARS-CoV-2 Beta (B.1.351) Spike S1+S2 trimer Protein SARS-CoV-2 Beta (B.1.351, B.1.351.2, B.1.351.3) Spike RBD Protein SARS-CoV-2 Delta (B.1.617.2) Spike S1+S2 trimer Protein SARS-CoV-2 Delta (B.1.617.2) Spike RBD Protein SARS-CoV-2 Omicron (B.1.1.529) S1+S2 trimer Protein SARS-CoV-2 Omicron (B.1.1.529) Spike RBD Protein
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 to -80 degree C. Preservative-Free. Avoid repeated freeze-thaw cycles.



ELISA
Serial dilutions of SARS-CoV-2 Omicron (BA.4/BA.5/BA.2.75) Spike RBD Specific Antibody, Chimeric MAb (#AAA258681) could block the bind between Human ACE2 Protein and SARS-CoV-2 Spike RBD Protein. IC50 is 60-90 ng/mL.

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 B.1.1.529 (Omicron) sublineage BA.4 or BA.5 Spike Pseudovirus, under treatment of serial dilutions of neutralizing antibody. The infection was neutralized by increasing concentrations of Anti-SARS-CoV-2 Neutralizing Antibody (#AAA258681). Rate of inhibition was determined by comparing the Relative Light Unit (RLU) of Luciferase reporter in different antibody concentrations. The IC50 (BA.4/BA.5) is typically 0.0037 ug/mL. The IC50 (BA.5) is typically 0.0016 ug/mL.

ADDITIONAL INFORMATION

Related Product Information for COVID-19 recombinant antibody

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.

Product Categories/Family for COVID-19 recombinant antibody

virus

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/covid-19-omicron-ba4-ba5-ba275-spike-rbd-specific-coronavirus-recombinant-antibody-clone-d003-neutralization-assay-elisa/258681>