Datasheet for ABIN6953152

Recombinant anti-SARS-CoV-2 Spike S1 antibody (RBD)

4 Images

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Overview

Quantity:	100 µL
Target:	SARS-CoV-2 Spike S1
Binding Specificity:	RBD
Reactivity:	SARS Coronavirus-2 (SARS-CoV-2)
Host:	Human
Antibody Type:	Recombinant Antibody
Clonality:	Monoclonal
Application:	ELISA, Neutralization (Neut), Colloidal Gold Immunochromatography Assay (GICA)

Product Details

Immunogen:	Recombinant Human Novel Coronavirus Spike glycoprotein(S) (319-541aa)
Clone:	A1
Isotype:	IgG1
Fragment:	single-domain Antibody (sdAb)
Characteristics:	This SARS-CoV-2 Spike RBD Nanobody is a recombinant monoclonal antibody generated through the expression of a DNA sequence inserting a human IgG1 Fc domain at the C-terminus, in human embryonic kidney 293 cells (HEK293). The DNA sequence encodes the SARS-CoV-2 spike receptor-binding domain (RBD). The antibody is purified by protein G in vitro. It has been validated with high reactivity towards SARS-CoV-2-S1-RBD by a functional ELISA and good sensitivity for human SARS-CoV-2 spike glycoprotein (S protein) via the Colloidal Gold Immunochromatography Assay (GICA). In neutralization assay, the binding signal of SARS-CoV-

Product Details

	2 Spike RBD Nanobody was inhibited by ACE2 protein-HRP conjugated inhibitor, with a 0.1074 μg/mL IC50. Specifically binding and recognizing the RBD of the SARS-CoV-2 spike glycoprotein (S protein), so the SARS-CoV-2 Spike RBD Nanobody can react with samples infected with human coronavirus SARS-CoV-2. But it does not respond to MERS or SARS-CoV spike protein. Akin to other nanobodies, this recombinant nanobody is small and stable, which allows for its reaching to hidden epitopes such as crevices of target proteins. VHH fusion with human IgG1 Fc
Purification:	affinity-chromatography

Target Details

Target:	SARS-CoV-2 Spike S1
Abstract:	SARS-CoV-2 Spike S1 Products
Target Type:	Viral Protein
Background:	Spike glycoprotein comprises two functional subunits responsible for binding to the host cell receptor (S1 subunit) and fusion of the viral and cellular membranes (S2 subunit). For many coronavirus (CoVs), S is cleaved at the boundary between the S1 and S2 subunits, which remain non-covalently bound in the prefusion conformation. The distal S1 subunit comprises the receptor-binding domain(s) and contributes to stabilization of the prefusion state of the membrane-anchored S2 subunit that contains the fusion machinery. S is further cleaved by host proteases at the so-called S2' site located immediately upstream of the fusion peptide in all CoVs. This cleavage has been proposed to activate the protein for membrane fusion via extensive irreversible conformational changes. However, different CoVs use distinct domains within the S1 subunit to recognize a variety of attachment and entry receptors, depending on the viral species. Endemic human coronaviruses OC43 and HKU1 attach via their S domain A to 5-N-acetyl-9-O-acetyl-sialosides found on glycoproteins and glycolipids at the host cell surface to enable entry into susceptible cells. MERS-CoV S uses domain A to recognize non-acetylated sialoside attachment receptors, which likely promote subsequent binding of domain B to the entry receptor, dipeptidyl-peptidase 4. SARS-CoV and several SARS-related coronaviruses (SARSr-CoV) interact directly with angiotensin-converting enzyme 2 (ACE2) via SB to enter target cells.
Gene ID:	43740568
UniProt:	P0DTC2

Application Details

Application Notes:	ELISA 1:10000-1:100000 GICA 1:10000-1:40000 Neutralising 1:100-1:10000
Restrictions:	For Research Use only

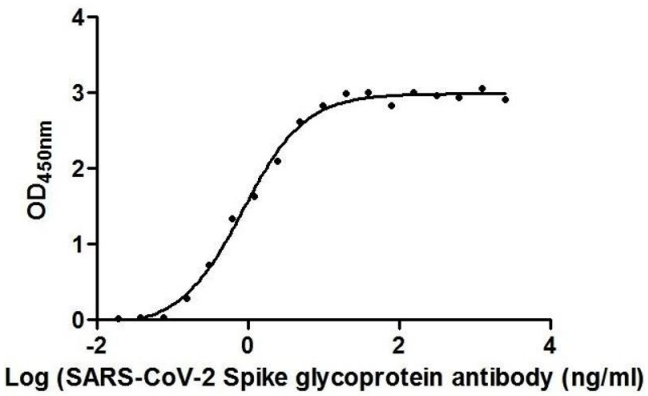
Handling

Format:	Liquid
Buffer:	50 % Glycerol, 0.01M PBS, pH 7.4, 0.03 % 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:	-20 °C,-80 °C
Storage Comment:	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze

Images

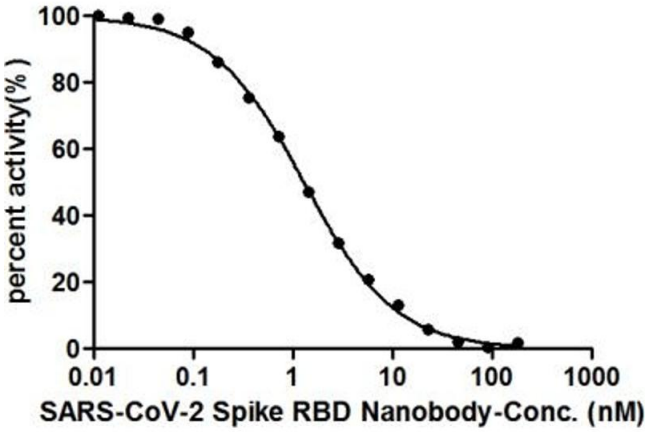
Rapid Test

Image 1. GICA: In the Colloidal Gold Immunochromatography Assay detection system, the background of antibody (ABIN6953152) is clean, the detection limit can be as low as 25 ng/mL (1.75 ng/0.07ml), and the sensitivity is very good.



ELISA

Image 2. The Binding Activity of SARS-CoV-2 Spike RBD Nanobody with SARS-CoV-2-S1-RBD. Activity: Measured by its binding ability in a functional ELISA. Immobilized SARS-CoV-2-S1-RBD (ABIN6953166) at 2 μg/mL can bind SARS-CoV-2 Spike RBD Nanobody, the EC50 is 0.8674 ng/mL.



ELISA

Image 3. Activity: Binding signal of SARS-CoV-2 Spike RBD Nanobody (ABIN6953152) and SARS-CoV-2-S1-RBD (ABIN6953166) was inhibited by ACE2 protein-HRP conjugated inhibitor with the IC50 is 1.296 nM.

Please check the product details page for more images. Overall 4 images are available for ABIN6953152.