Datasheet for ABIN6953166

SARS-CoV-2 Spike S1 Protein (RBD) (His-SUMOstar Tag)

5 Images

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Overview

Quantity:	1 mg
Target:	SARS-CoV-2 Spike S1
Protein Characteristics:	RBD
Origin:	SARS Coronavirus-2 (SARS-CoV-2)
Source:	Yeast
Protein Type:	Recombinant
Purification tag / Conjugate:	This SARS-CoV-2 Spike S1 protein is labelled with His-SUMOstar Tag.

Product Details

Sequence:	RVQPTESIVR FPNITNLCPF GEVFNATRFA SVYAWNRKRI SNCVADYSVL YNSASFSTFK CYGVSPTKLN DLCFTNVYAD SFVIRGDEVR QIAPGQTGKI ADYNYKLPDD FTGCVIAWNS NNLDSKVGGN YNYLYRLFRK SNLKPFERDI STEIYQAGST PCNGVEGFNC YFPLQSYGFQ PTNGVGYQPY RVVVLSFELL HAPATVCGPK KSTNLVKNKC VNF
Characteristics:	N-terminal 6xHis-sumostar-tagged
Purity:	Greater than 85 % as determined by SDS-PAGE.

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

Target Details

	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

Comment:	Measured by its binding ability in a functional ELISA. Immobilized SARS-CoV-2-S1-RBD at 2 µg/ml can bind SARS-CoV-2-S Antibody, the EC50 of SARS-CoV-2-S1-RBD protein is 19.60-39.42 ng/ml. Measured by its binding ability in a functional ELISA. Immobilized SARS-CoV-2-S1-RBD at 5 µg/ml can bind human ACE2, the EC50 of SARS-CoV-2-S1-RBD protein is 31.80 - 44.69 ng/ml.
Restrictions:	For Research Use only

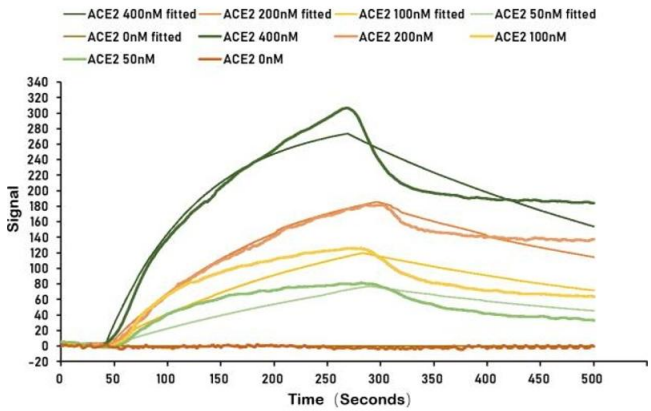
Handling

Format:	Lyophilized
Reconstitution:	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50 % of glycerol (final concentration) and aliquot for long-term storage at -20 °C/-80 °C.

Handling

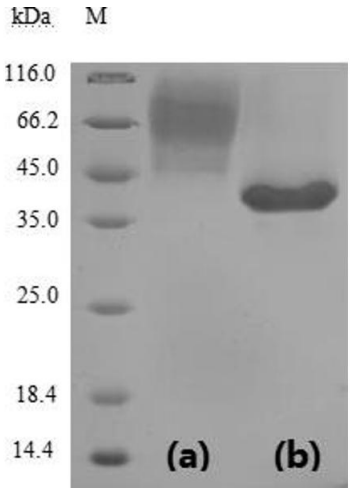
Buffer:	Tris/PBS-based buffer, 6 % Trehalose, pH 8.0
Storage:	-20 °C
Storage Comment:	Store at -20°C upon receipt, aliquoting is necessary for mutiple use. Avoid repeated freeze-thaw cycles.

Images



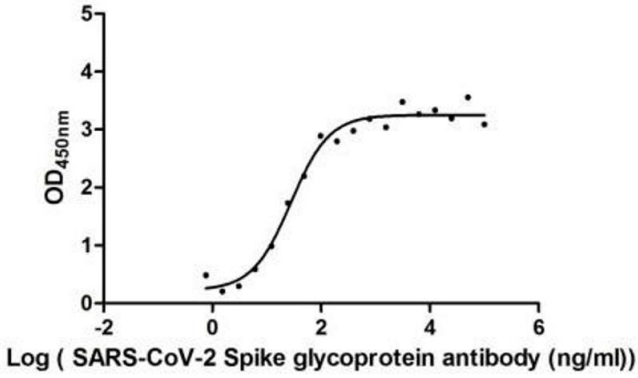
Surface Plasmon Resonance

Image 1. SARS-CoV-2 Spike protein RBD his/sumostar tag (ABIN6953166) captured on COOH chip can bind Human ACE2 protein Fc tag with an affinity constant of 100 nM as detected by LSPR Assay.



SDS-PAGE

Image 2. (Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5 % enrichment gel and 15 % separation gel. Predicted band size: 38.2 kDa. Observed band size: (a) 68 kDa before EndoH Digestion (b) 38 kDa after EndoH Digestion



ELISA

Image 3. Activity: Measured by its binding ability in a functional ELISA. Immobilized SARS-CoV-2-S1-RBD at 2 µg/mL can bind SARS-CoV-2-S Antibody (ABIN6952663), the EC50 of SARS-CoV-2-S1-RBD protein is 19.60-39.42 ng/mL

Please check the product details page for more images. Overall 5 images are available for ABIN6953166.