Datasheet for ABIN7013275

SARS-CoV-2 Spike Protein (B.1.1.7 - alpha) (His tag)

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Overview

Quantity:	50 µg
Target:	SARS-CoV-2 Spike
Protein Characteristics:	B.1.1.7 - alpha
Origin:	SARS Coronavirus-2 (SARS-CoV-2), SARS CoV-2 Alpha
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This SARS-CoV-2 Spike protein is labelled with His tag.

Product Details

Sequence:	AA 16-1213
Specificity:	SARS-CoV-2 S protein (HV69-70del, Y144del, N501Y, A570D, D614G, P681H, T716I, S982A, D1118H), His Tag (MALS verified)
Characteristics:	SARS-CoV-2 S protein, His Tag is the ectodomain of SARS-CoV-2 S protein that contains AA Val 16 - Pro 1213 (Accession # QHD43416.1) and HV69-70del, Y144del, N501Y, A570D, D614G, P681H, T716I, S982A, D1118H mutations, which have become increasingly common in SARS-CoV-2 viruses from around the world. The recombinant protein is expressed from human 293 cells (HEK293) with T4 fibritin trimerization motif and a polyhistidine tag at the C-terminus. Proline substitutions (F817P, A892P, A899P, A942P, K986P, V987P) and alanine substitutions (R683A and R685A) are introduced to stabilize the trimeric prefusion state of SARS-CoV-2 S protein and abolish the furin cleavage site, respectively. HV69-70del / Y144del / N501Y / A570D / D614G / P681H / T716I / S982A / D1118H mutations were identified in the SARS-CoV-2

Product Details

	variant (known as 20B/501Y.V1, VOC 202012/01, or B.1.1.7 lineage) which emerged in the United Kindom.
Purity:	>90 % as determined by SDS-PAGE.
Endotoxin Level:	Less than 1.0 EU per µg by the LAL method.

Target Details

Target:	SARS-CoV-2 Spike
Alternative Name:	SARS-CoV-2 S protein (SARS-CoV-2 Spike Products)
Target Type:	Viral Protein
Background:	It's been reported that Coronavirus 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.
Molecular Weight:	137.8 kDa

Application Details

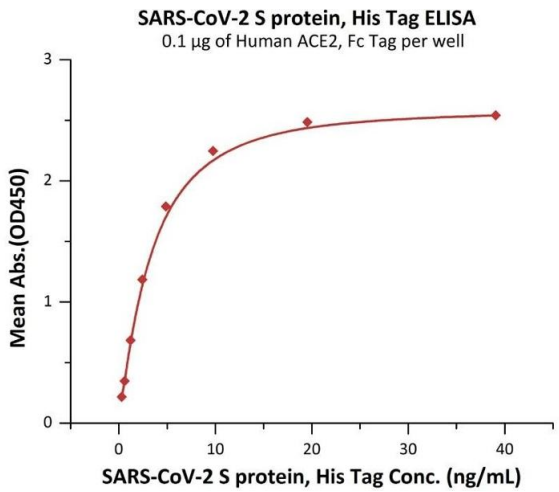
Application Notes:	MALS verified
Restrictions:	For Research Use only

Handling

Format:	Lyophilized
Buffer:	PBS
Storage:	-20 °C

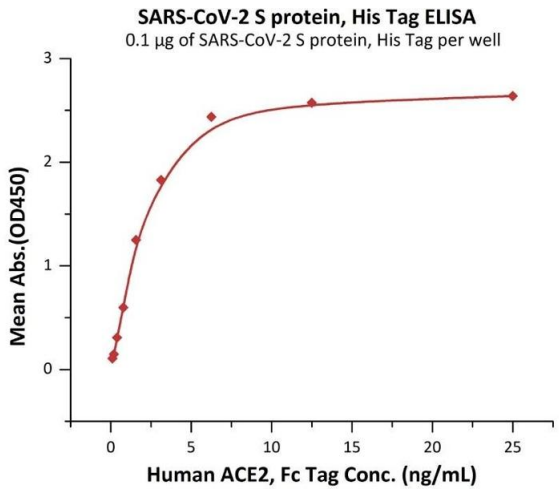
Publications

Product cited in:	Longworth, Dittmar: "An antigen microarray protocol for COVID-19 serological analysis." in: **STAR protocols**, Vol. 2, Issue 3, pp. 100815, (2021) (PubMed).



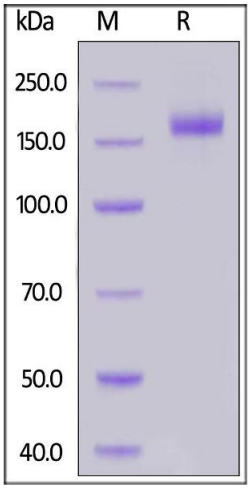
ELISA

Image 1. Immobilized Human ACE2, Fc Tag (ABIN6952459,ABIN6952465) at 1 µg/mL (100 µL/well) can bind SARS-CoV-2 S protein, His Tag (ABIN6973222) with a linear range of 0.3-5 ng/mL (Routinely tested).



ELISA

Image 2. Immobilized SARS-CoV-2 S protein, His Tag (ABIN6973222) at 1 µg/mL (100 µL/well) can bind Human ACE2, Fc Tag (ABIN6952459,ABIN6952465) with a linear range of 0.1-3 ng/mL (QC tested).



SDS-PAGE

Image 3. SARS-CoV-2 S protein, His Tag on under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 90 % .

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