Datasheet for ABIN7041445

SARS-CoV-2 Spike Protein (B.1.1.529 - Omicron, Trimer) (His-Avi Tag,Biotin)

3 Images

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Overview

Quantity:	200 µg
Target:	SARS-CoV-2 Spike
Protein Characteristics:	B.1.1.529 - Omicron, Trimer
Origin:	SARS Coronavirus-2 (SARS-CoV-2), SARS CoV-2 Omicron
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This SARS-CoV-2 Spike protein is labelled with His-Avi Tag,Biotin.
Application:	ELISA, SDS-PAGE (SDS)

Product Details

Purpose:	Biotinylated SARS-CoV-2 Spike Trimer, His,Avitag™ (B.1.1.529/Omicron) (MALS verified)
Specificity:	Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.
Characteristics:	Biotinylated SARS-CoV-2 Spike Trimer, His,Avitag (B.1.1.529/Omicron) is the ectodomain of SARS-CoV-2 spike protein which contains AA Val 16 - Pro 1213 (Accession # QHD43416.1(A67V, HV69-70del, T95I, G142D, VYY143-145del, N211del, L212I, ins214EPE, G339D, S371L, S373P, S375F, K417N, N440K, G446S, S477N, T478K, E484A, Q493R, G496S, Q498R, N501Y, Y505H, T547K, D614G, H655Y, N679K, P681H, N764K, D796Y, N856K, Q954H, N969K, L981F). The 35 spike mutations are identified on the SARS-CoV-2 Omicron variant (Pango lineage: B.1.1.529; GISAID clade: GR/484A; Nextstrain clade: 21K). 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,

Product Details

	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. Predicted N-terminus: Val 16
Purity:	> 95% as determined by SDS-PAGE. > 95% as determined by SEC-MALS.
Sterility:	0.22 μm filtered
Endotoxin Level:	Less than 1.0 EU per μg by the LAL method.

Target Details

Target:	SARS-CoV-2 Spike
Abstract:	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:	139.8 kDa

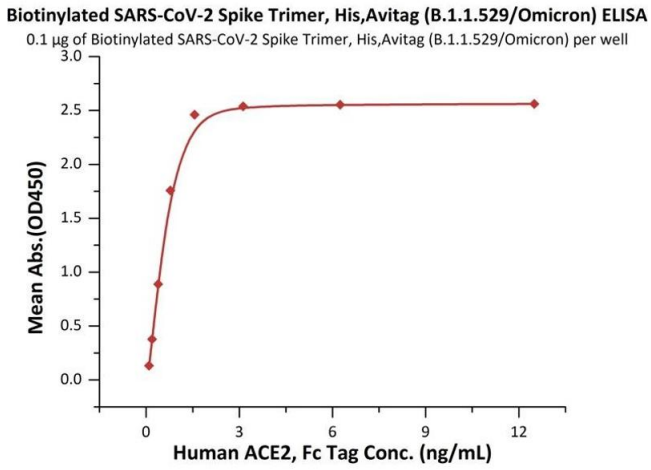
Application Details

Comment:	Ready-to-use AvitagTM biotinylated protein: The product is exclusively produced using the AvitagTM technology. Briefly, a unique 15 amino acid peptide, the Avi tag, is introduced into the recombinant protein during expression vector construction. The single lysine residue in the Avi tag is enzymatically biotinylated by the E. Coli biotin ligase BirA. This single-point enzymatic labeling technique brings many advantages for commonly used binding assays. The biotinylation happens on the lysine residue of Avi tag, and therefore does NOT interfere with the target protein's natural binding activities. In addition, when immobilized on an avidin-coated surface, the protein orientation is uniform because the position of the Avi tag in the protein is precisely controlled.
Restrictions:	For Research Use only

Handling

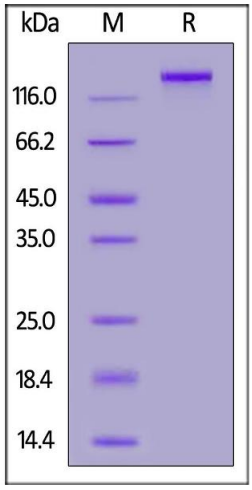
Format:	Lyophilized
Buffer:	Lyophilized from 0.22 μm filtered solution in PBS, pH7.4. Normally trehalose is added as protectant before lyophilization.
Handling Advice:	Please avoid repeated freeze-thaw cycles.
Storage:	-20 °C/-80 °C
Storage Comment:	For long term storage, the product should be stored at lyophilized state at -20°C or lower.This product is stable after storage at: 4-8°C for 12 months in lyophilized state, -70°C for 3 months under sterile conditions after reconstitution.
Expiry Date:	12 monts

Images



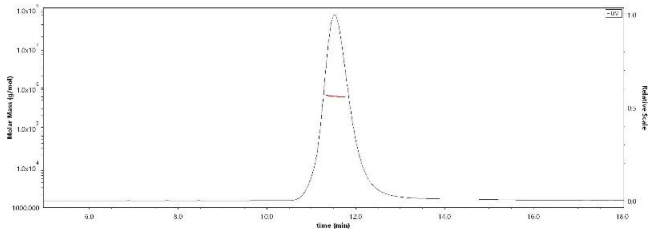
ELISA

Image 1. Immobilized Biotinylated SARS-CoV-2 Spike Trimer, His,Avitag™ (B.1.1.529/Omicron) (MALS verified) at 1 μg/mL (100 μL/well) on streptavidin precoated (0.5 μg/well) plate can bind Human ACE2, Fc Tag (ABIN6952465) with a linear range of 0.1-0.8 ng/mL.



SDS-PAGE

Image 2. Biotinylated SARS-CoV-2 Spike Trimer, His,Avitag (B.1.1.529/Omicron) on SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.



Size-exclusion chromatography-High Pressure Liquid Chromatography

Image 3. The purity of Biotinylated SARS-CoV-2 Spike Trimer, His,Avitag (B.1.1.529/Omicron) is more than 95% verified by SEC-MALS.