

Datasheet for ABIN7041439

SARS-CoV-2 Spike Protein (B.1.1.529 - Omicron, Trimer) (His tag)[Go to Product page](#)**3** Images

Overview

Quantity:	50 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 tag.
Application:	ELISA, SDS-PAGE (SDS)

Product Details

Purpose:	SARS-CoV-2 Spike Trimer, His Tag (B.1.1.529/Omicron) (MALS verified)
Characteristics:	<p>SARS-CoV-2 Spike Trimer, His Tag (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 fibrin 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. Predicted N-terminus: Val 16</p>

Product Details

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

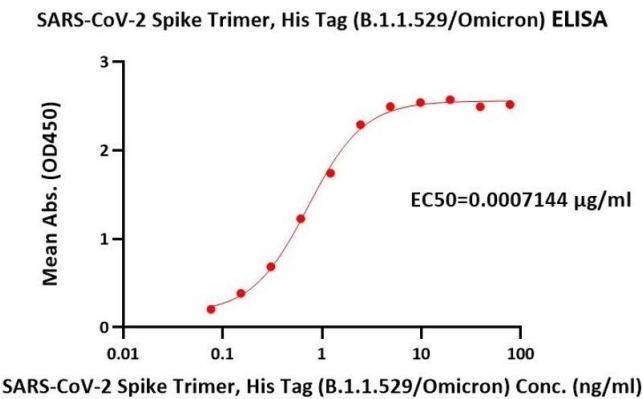
Target:	SARS-CoV-2 Spike
Abstract:	SARS-CoV-2 Spike Products
Target Type:	Viral Protein
Background:	It's been reported that Coronavirus can infect the human respiratory epithelial cells through interaction with the human ACE2 receptor. The spike protein is a large type I transmembrane protein containing 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:	138.2 kDa

Application Details

Restrictions:	For Research Use only
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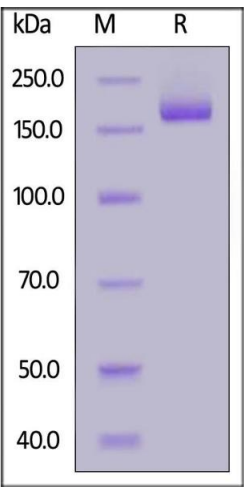
Handling

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 months



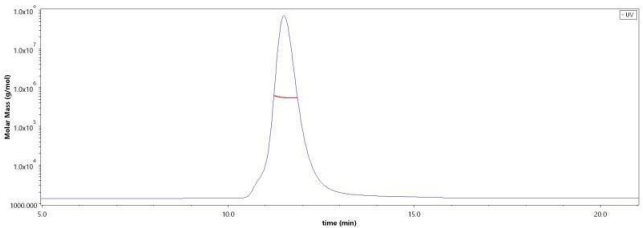
ELISA

Image 1. Immobilized Human ACE2, Fc Tag (ABIN6952465) at 5 µg/mL (100 µL/well) can bind SARS-CoV-2 Spike Trimer, His Tag (B.1.1.529/Omicron) with a linear range of 0.08-1 ng/mL.



SDS-PAGE

Image 2. SARS-CoV-2 Spike Trimer, His Tag (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 SARS-CoV-2 Spike Trimer, His Tag (B.1.1.529/Omicron) is 96.8% and the molecular weight of this protein is around 480-550 kDa verified by SEC-MALS.