

Datasheet for ABIN7041436

## SARS-CoV-2 Spike Protein (B.1.1.529 - Omicron, RBD) (His tag)



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### Overview

Quantity:	100 µg
Target:	SARS-CoV-2 Spike
Protein Characteristics:	B.1.1.529 - Omicron, RBD
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 RBD, His Tag (B.1.1.529/Omicron) (MALs verified)
Characteristics:	SARS-CoV-2 Spike RBD, His Tag (B.1.1.529/Omicron) is expressed from human 293 cells (HEK293). It contains AA Arg 319 - Lys 537 (Accession # QHD43416.1 (G339D, S371L, S373P, S375F, K417N, N440K, G446S, S477N, T478K, E484A, Q493R, G496S, Q498R, N501Y, Y505H). The spike mutations are identified on the SARS-CoV-2 Omicron variant (Pango lineage: B.1.1.529; GISAID clade: GR/484A; Nextstrain clade: 21K). Predicted N-terminus: Arg 319
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:	<a href="#">SARS-CoV-2 Spike Products</a>
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:	26.8 kDa

## Application Details

Restrictions:	For Research Use only
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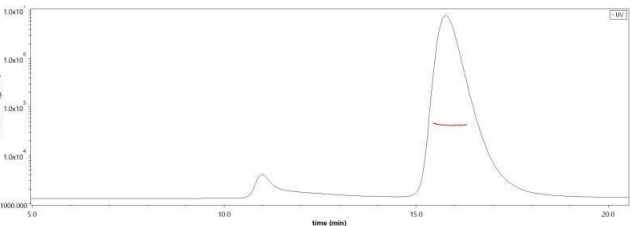
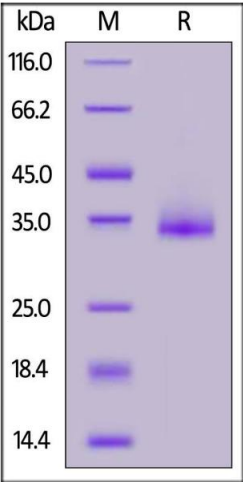
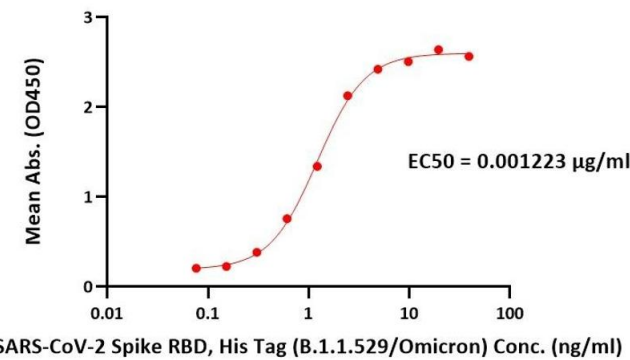
## Handling

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

## Publications

Product cited in:	Vogt, Augusto, Martina, Chang, Nasrallah, Speiser, Vogel, Bachmann, Mohsen: "Increased Receptor Affinity and Reduced Recognition by Specific Antibodies Contribute to Immune Escape of SARS-CoV-2 Variant Omicron." in: <b>Vaccines</b> , Vol. 10, Issue 5, (2022) ( <a href="#">PubMed</a> ).
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SARS-CoV-2 Spike RBD, His Tag (B.1.1.529/Omicron) ELISA



ELISA

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

SDS-PAGE

**Image 2.** SARS-CoV-2 Spike RBD, 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 RBD, His Tag (B.1.1.529/Omicron) is more than 90% and the molecular weight of this protein is around 30-40 kDa verified by SEC-MALS.