Datasheet for ABIN7013289

SARS-CoV-2 Spike Protein (P.1 - gamma, Trimer) (His tag,AVI tag,Biotin)

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Overview

Quantity:	200 µg
Target:	SARS-CoV-2 Spike
Protein Characteristics:	P.1 - gamma, Trimer
Origin:	SARS Coronavirus-2 (SARS-CoV-2), SARS CoV-2 Gamma
Source:	HEK-293 Cells
Protein Type:	Recombinant
Biological Activity:	Active
Purification tag / Conjugate:	This SARS-CoV-2 Spike protein is labelled with His tag,AVI tag,Biotin.

Product Details

Purpose:	Biotinylated SARS-CoV-2 S protein (L18F, T20N, P26S, D138Y, R190S, K417T, E484K, N501Y, D614G, H655Y, T1027I, V1176F) trimer, His,Avitag™ (MALS verified)
Sequence:	AA 16-1213
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 S protein trimer, His,Avitag is expressed from human 293 cells (HEK293). It contains AA Val 16 - Pro 1213 (Accession # QHD43416.1). 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,

Product Details

	respectively. L18F/ T20N/ P26S/ D138Y/ R190S/ K417T/ E484K/ N501Y/ D614G/ H655Y/ T1027I/ V1176F) mutations were identified on the spike protein in the SARS-CoV-2 variant (known as P.1) which emerged in Brazil.
Purity:	>95 % 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:	139.8 kDa

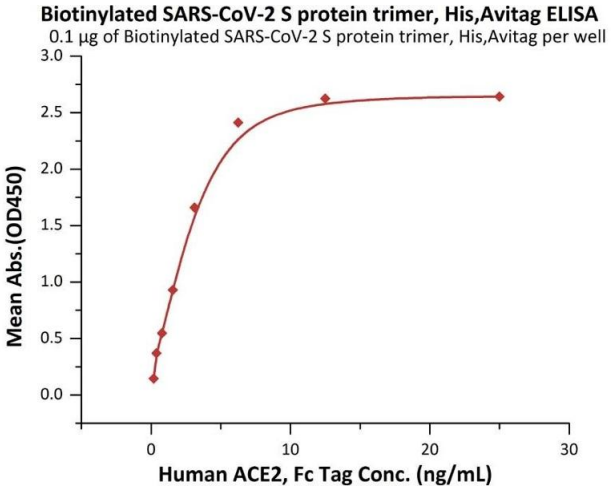
Application Details

Comment:	Ready-to-use Avitag™ biotinylated protein: The product is exclusively produced using the Avitag™ 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

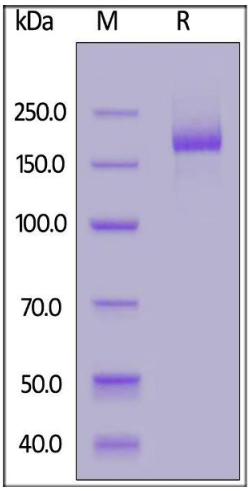
Format:	Lyophilized
Buffer:	PBS
Storage:	-20 °C

Images



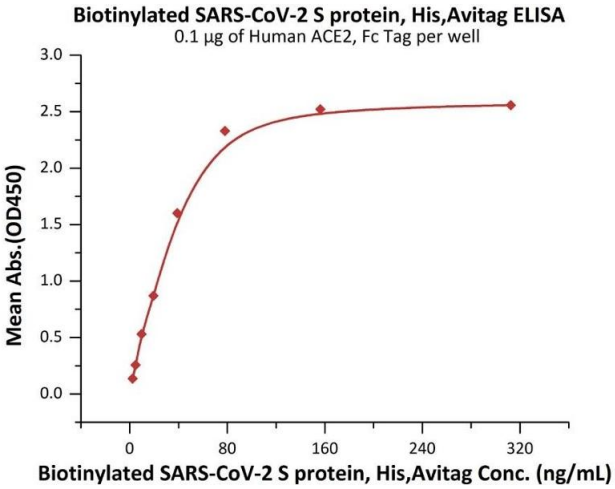
ELISA

Image 1. Immobilized Biotinylated SARS-CoV-2 S protein trimer, His,Avitag (ABIN6992367) at 1 µg/mL (100 µL/well) on streptavidin precoated (0.5 µg/well) plate can bind Human ACE2, Fc Tag (ABIN6952459,ABIN6952465) with a linear range of 0.2-3 ng/mL (Routinely tested).



SDS-PAGE

Image 2. Biotinylated SARS-CoV-2 S protein trimer, His,Avitag on under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95 % .



ELISA

Image 3. Immobilized Human ACE2, Fc Tag (ABIN6952459,ABIN6952465) at 1 µg/mL (100 µL/well) can bind Biotinylated SARS-CoV-2 S protein, His,Avitag (ABIN6992367) with a linear range of 2-39 ng/mL (QC tested).