Datasheet for ABIN7535174

# SARS-CoV-2 Spike S1 Protein (His tag)

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## Overview

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| Quantity: | 100 µg |
| Target: | SARS-CoV-2 Spike S1 |
| Origin: | SARS Coronavirus (SARS-CoV) |
| Source: | HEK-293 Cells |
| Protein Type: | Recombinant |
| Biological Activity: | Active |
| Purification tag / Conjugate: | This SARS-CoV-2 Spike S1 protein is labelled with His tag. |

## Product Details

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| Purpose: | Active Recombinant SARS-CoV Spike S1 Protein |
| Sequence: | SDLDRCTTFD DVQAPNYTQH TSSMRGVYYP DEIFRSDTLY LTQDLFLPFY SNVTGFHTIN HTFDNPVIPF KDGIYFAATE KSNVVRGWVF GSTMNNKSQS VIIINNSTNV VIRACNFELC DNPFFAVSKP MGTQTHTMIF DNAFNCTFEY ISDAFSLDVS EKSGNFKHLR EFVFKNKDGF LYVYKGYQPI DVVRDLPSGF NTLKPIFKLP LGINITNFRA ILTAFSPAQD TWGTSAAAYF VGYLKPTTFM LKYDENGTIT DAVDCSQNPL AELKCSVKSF EIDKGIYQTS NFRVVPSGDV VRFPNITNLC PFGEVFNATK FPSVYAWERK KISNCVADYS VLYNSTFFST FKCYGVSATK LNDLCFSNVY ADSFVVKGDD VRQIAPGQTG VIADYNYKLP DDFMGCVLAW NTRNIDATST GNYNYKYRYL RHGKLRPFER DISNVPFSPD GKPCTPPALN CYWPLNDYGF YTTTGIGYQP YRVVVLSFEL LNAPATVCGP KLSTDLIKNQ CVNFNFNGLT GTGVLTPSSK RFQPFQQFGR DVSDFTDSVR DPKTSEILDI SPCSFGGVSV ITPGTNASSE VAVLYQDVNC TDVSTAIHAD QLTPAWRIYS TGNNVFQTQA GCLIGAEHVD TSYECDIPIG AGICASYHTV SLLR |
| Specificity: | Ser14-Arg667 |

## Product Details

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| Purity: | > 90 % by SDS-PAGE. |
| Sterility: | 0.22 μm filtered |
| Endotoxin Level: | < 1.0 EU/μg of the protein by LAL method. |
| Biological Activity Comment: | Measured by its binding ability in a functional ELISA. Immobilized SARS-CoV Spike S1 at 2μg/mL (100μL/well) can bind Human ACE2 with a linear range of 0.05-11.55 ng/mL. |

## Target Details

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| Target: | SARS-CoV-2 Spike S1 |
| Alternative Name: | SARS-CoV Spike S1 (SARS-CoV-2 Spike S1 Products) |
| Target Type: | Viral Protein |
| Background: | Description: The spike (S) glycoprotein of coronaviruses contains protrusions that will only bind to certain receptors on the host cell. Known receptors bind S1 are ACE2, angiotensin-converting enzyme 2, DPP4, dipeptidyl peptidase-4, APN, aminopeptidase N, CEACAM, carcinoembryonic antigen-related cell adhesion molecule 1, Sia, sialic acid, O-ac Sia, O-acetylated sialic acid. The spike is essential for both host specificity and viral infectivity. The term 'peplomer' is typically used to refer to a grouping of heterologous proteins on the virus surface that function together. The spike (S) glycoprotein of coronaviruses is known to be essential in the binding of the virus to the host cell at the advent of the infection process. It's been reported that SARS-CoV-2 (COVID-19 coronavirus, 2019-nCoV) 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. The main functions for the Spike protein are summarized as: Mediate receptor binding and membrane fusion, Defines the range of the hosts and specificity of the virus, Main component to bind with the neutralizing antibody, Key target for vaccine design, Can be transmitted between different hosts through gene recombination or mutation of the receptor binding domain (RBD), leading to a higher mortality rate.<br>Name: Spike,Spike RBD,Spike S1 |
| Gene ID: | 1489668 |
| UniProt: | Q5DIC5 |

## Application Details

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| Restrictions: | For Research Use only |

## Handling

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| Format: | Lyophilized |
| Reconstitution: | Centrifuge the vial before opening. Reconstitute to a concentration of 0.1-0.5 mg/mL in sterile distilled water. Avoid votex or vigorously pipetting the protein. For long term storage, it is recommended to add a carrier protein or stablizer (e.g. 0.1 % BSA, 5 % HSA, 10 % FBS or 5 % Trehalose), and aliquot the reconstituted protein solution to minimize free-thaw cycles. |
| Buffer: | Lyophilized from a 0.22 μm filtered solution of PBS, pH 7.4. |
| Storage: | -20 °C,-80 °C |
| Storage Comment: | Store the lyophilized protein at -20°C to -80°C for long term.\|After reconstitution, the protein solution is stable at -20°C for 3 months, at 2-8°C for up to 1 week. |

 