## **PRODUCT INFORMATION**

Expression system HEK293

**Domain** 306-515aa

**UniProt No.** P59594

NCBI Accession No. NP\_828851.1

### **Alternative Names**

E2 glycoprotein precursor, Spike glycoprotein, S glycoprotein, E2, Peplomer protein, Severe acute repiratory Syndrome-related Coronavirus, SARS, SRAS-CoV, SARS-CoV1

## **PRODUCT SPECIFICATION**

### **Molecular Weight**

24.8kDa (220aa)

### Concentration

0.5 mg/ml (determined by Absorbance at 280nm)

### Formulation

Liquid. In Phosphate-Buffered Saline (pH 7.4) containing 10% glycerol

Purity > 95% by SDS - PAGE

**Endotoxin level** 

< 1 EU per lug of protein (determined by LAL method)

## **Biological Activity**

Measured by its binding ability in a functional ELISA with Human ACE-2 (CAT# ATGP3963)

**Tag** His-Tag

**Application** SDS-PAGE, Bioactivity

## **Storage Condition**

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

# **BACKGROUND**



### Description

Severe Acute Respiratory Syndrome Coronavirus (SARS-CoV), Middle Eastern Respiratory Syndrome Coronavirus (MERS-CoV), and the recently identified novel Coronavirus (SARS-CoV-2) belong to the Coronaviridae family, genus Betacoronavirus, that has been related to important epidemiological outbreaks. SARS-CoV emerged in 2003 as a significant threat to human health. SARS-CoV has four structural proteins, known as the S (spike), E (envelope), M (membrane), and N (nucleocapsid) proteins. The spike protein, responsible for allowing the virus to attach to and fuse with the membrane of a host cell and 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. It attaches the virion to the cell membrane by interacting with host receptor, initiating the infection. A metallopeptidase, angiotensin-converting enzyme 2 (ACE-2), has been identified as a functional receptor for SARS-CoV through interaction with a receptor binding domain (RBD) located at the C-terminus of S1 subunit. Recombinant SARS-CoV spike RBD protein fused to His-tag at C-terminus, was expressed in HEK293 cell and purified by using conventional chromatography techniques.

### **Amino acid Sequence**

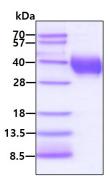
<DGSM>RVVPSG DVVRFPNITN LCPFGEVFNA TKFPSVYAWE RKKISNCVAD YSVLYNSTFF STFKCYGVSA TKLNDLCFSN VYADSFVVKG DDVRQIAPGQ TGVIADYNYK LPDDFMGCVL AWNTRNIDAT STGNYNYKYR YLRHGKLRPF ERDISNVPFS PDGKPCTPPA LNCYWPLNDY GFYTTTGIGY QPYRVVVLSF ELLNAPATVC GPKL<HHHHHH>

### **General References**

Kukla M., et al, (2020) J Clin Med. 9:1420. Ayouba A., et al,(2020) J Clin Virol. 129:104521. Tortorici, M.A. and D. Veesler (2019). Adv. Virus Res. 105:93-116. Li F, et al, (2005) Science. 309:1864-1868. Struck AW, et al, (2012) Antiviral Res. 94:288-296.

## DATA

#### SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain

## **Biological Activity**

NKMAXBiO We support you, we believe in your research Recombinant SARS-CoV Spike RBD protein

Catalog Number: ATGP3966

SARS-CoV Spike RBD is coated at 5ug/ml (100 ul/well) can bind ACE-2 (CAT# ATGP3963) in a Functional ELISA assay.

