

# Recombinant MERS-CoV Spike S2 Subunit protein

Catalog Number: ATGP3981

## PRODUCT INFORMATION

### Expression system

Baculovirus

### Domain

752-1296aa

### UniProt No.

K0BRG7

### NCBI Accession No.

AFS88936

### Alternative Names

Middle East respiratory syndrome coronavirus, Human betacoronavirus 2c EMC/2012, MERS-CoV, MERS, MERS-CoV S2 P, Spike2 glycoprotein, S2 glycoprotein, S2, Spike S2 Subunit protein, S2 Subunit

## PRODUCT SPECIFICATION

### Molecular Weight

60.7kDa(554aa)

### Concentration

0.25mg/ml (determined by Absorbance at 280nm)

### Formulation

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

### Purity

> 85% by SDS - PAGE

### Endotoxin level

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

### Tag

His-Tag

### Application

SDS-PAGE

### 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

MERS-CoV, which causes the Middles East Respiratory Syndrome (MERS), belongs to a family of viruses known as coronaviruses. MERS-CoV was first identified in the Kingdom of Saudi Arabia in 2012, which is a single and positive stranded RNA virus. Dromedary camels are widely considered as the source of the transmission of MERS-

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CoV. The rate of human transmission among household contacts of MERS patients has been approximately 5 % based on serological analysis. MERS-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. MERS-CoV S mediates viral attachment and fusion to human cells via human cellular receptor DPP4, also known as CD26. The S protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity. Recombinant MERS-CoV Spike S2 Subunit, fused to His-tag at C-terminus, was expressed in insect cell, and purified by using conventional chromatography techniques.

## Amino acid Sequence

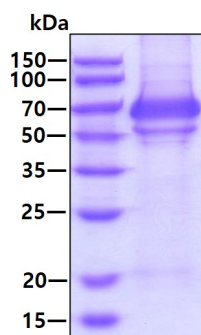
<ADP>SVPGEMR LASIAFNHPI QVDQLNSSF KLSIPTNFSF GVTQEYIQT IQKVTVDCKQ YVCNGFQKCE QLLREYGQFC SKINQALHGA NLRQDDSVRN LFASVKSSQS SPIIPGFGGD FNLTLLEPVS ISTGSRARS AIEDLLFDKV TIADPGYMQG YDDCMQGGPA SARDLICAQY VAGYKVLPL MDVNMEAAYT SLLGSIAGV GWTAGLSSFA AIPFAQSIFY RLNGVGITQQ VLSENQKLIA NKFNQALGAM QTGFTTTNEA FQKVQDAVNN NAQALSKLAS ELSNTFGAIS ASIGDIIQRL DVLEQDAQID RLINGRLTTL NAFVAQQLVR SESAALSAQL AKDKVNECVK AQSKRSGFCG QGTHIVSFVV NAPNGLYFMH VGYYPNHIIE VVSAYGLCDA ANPTNCIAPV NGYFIKTNT RIVDEWSYTG SSFYAPEPIT SLNTKYVAPQ VTYQNISTNL PPPLGNSTG IDFQDELDEF FKNVSTSI PN FGSLTQINTT LLDLYEMLS LQQVVKALNE SYIDLKELGN YTYYNKWP<HH HHHH>

## General References

- Junghyun Goo., et al. (2020) Virus Res. 278:197863.
- Yan-Hua Li., et al. (2019) Engineering. 5:940-947.
- Lingshu Wang., et al. (2018) J Virol. 92:e02002-2017.
- Nicolas Papageorgiou., et al. (2016) Acta Crystallogr D Struct Biol. 72:192-202.
- Xiao-Yan Che., et al. (2004) J Clin Microbiol. 42:2629-2635.

## DATA

### SDS-PAGE



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