

Recombinant MERS-CoV Spike S1 Subunit protein

Catalog Number: ATGP3980

PRODUCT INFORMATION

Expression system

Baculovirus

Domain

18-751aa

UniProt No.

K0BRG7

NCBI Accession No.

AFS88936

Alternative Names

Middle East respiratory syndrome coronavirus, Human betacoronavirus 2c EMC/2012, MERS-CoV, MERS, MERS-CoV S1 P, Spike1 glycoprotein, S1 glycoprotein, S1, Spike S1 Subunit protein, S1 Subunit

PRODUCT SPECIFICATION

Molecular Weight

82.0kDa(740aa)

Concentration

0.25mg/ml (determined by Bradford assay)

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)

Biological Activity

Measured by its binding ability in a functional ELISA with Human DPP4/CD26 (CAT# ATGP4109).

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

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Description

MERS-CoV, which causes the Middle 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-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 S1 Subunit, fused to His-tag at C-terminus, was expressed in insect cell, and purified by using conventional chromatography techniques.

Amino acid Sequence

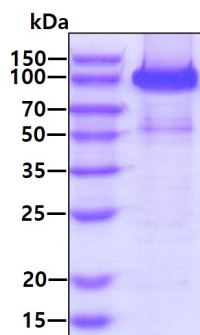
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YVDVGPDSVK SACIEVDIQQ TFFDKTWPRP IDVSKADGII YPQGRYTSNI TITYQGLFPY QGDHGDYVYV SAGHATGTTT
QKLFVANYSQ DVKQFANGFV VRIGAAANST GTVIISPSTS ATIRKIYPAF MLGSSVGNFS DGKMGRFFNH TLVLLPDGCG
TLLRAFYCIL EPRSGNHCPA GNSYTSFATY HTPATDCSDG NYNRNASLNS FKEYFNLRNC TFMYTYNITE DEILEWFGIT
QTAQGVHLFS SRYVDLYGGN MFQFATLPVY DTIKYYSIIP HSIKSIQSDR KAWAAFYVYK LQPLTFLDF SVDGYIRRAI
DCGFNDLSQL HCSYESFDVE SGVYSVSSFE AKPSGSVVEQ AEGVECDFSP LLSGTPPQVY NFKRLVFTNC NYNLTKLLSL
FSVNDFTCSQ ISPAAIASNC YSSLILDYFS YPLSMKSDLS VSSAGPISQF NYKQSFNPT CLILATVPHN LTTITKPLKY
SYINKCSRLL SDDRTEVPQL VNANQYSPCV SIVPSTVWED GDYRQQLSP LEGGGWLVAS GSTVAMTEQL QMGFGITVQY
GTDNTNSVCPK LEFANDTKIA SQLGNCVEYS LYGVSGRGVF QNCTAVGVRQ QRFVYDAYQN LVGYYSDDGN YYCLRACVSV
PVSVIYDKET KTHATLFGSV ACEHISSTMS QYSRSTRSML KRRDSTYGPL QTPVGCVLGL VNSSLFVEDC KLPLGQSLCA
LPDTPSTLTP RSVR<HHHHHH>
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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

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Biological Activity

MERS-CoV Spike S1 Subunit is coated at 2 ug/ml (100 ul/well) can bind human DPP4/CD26 (CAT# ATGP4109) in a functional ELISA assay.

