

Recombinant MERS-CoV Spike RBD protein

Catalog Number: ATGP4111

PRODUCT INFORMATION

Expression system

Baculovirus

Domain

358-606aa

UniProt No.

K0BRG7

NCBI Accession No.

AFS88936

Alternative Names

Middle East respiratory syndrome coronavirus, Human betacoronavirus 2c EMC/2012, MERS-CoV, MERS, MERS-CoV RBD, MERS RBD, receptor binding domain, RBD, Spike RBD protein

PRODUCT SPECIFICATION

Molecular Weight

28.2kDa(258aa)

Concentration

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

Formulation

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

Purity

> 90% 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 DPPiV/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 RBD, fused to His-tag at C-terminus, was expressed in insect cell and purified by using conventional chromatography techniques.

Amino acid Sequence

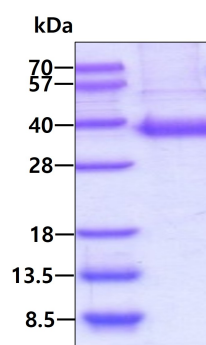
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KIASQLGNCV EY<HHHHHH>
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General References

- 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

Biological Activity

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

