

# MERS-CoV Spike S2 Subunit antibody

Catalog Number: ATGA0593

## PRODUCT INFORMATION

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**Catalog number**

ATGA0593

**Clone No.**

AT14H8

**Product type**

Monoclonal antibody

**UnitProt 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

**Additional Information**

S2-14H8 mAb, which showed binding affinity to S2, showed partial neutralizing effect. (Virus Res. 2020 Mar 278:197863)

## PRODUCT SPECIFICATION

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**Antibody Host**

Mouse

**Reacts With**

MERS-CoV

**Concentration**

1mg/ml (determined by BCA assay)

**Formulation**

Liquid in. Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% glycerol

**Immunogen**

Recombinant MERS-CoV Spike S2 Subunit (752-1296aa) purified from Baculovirus

**Isotype**

IgG2b kappa

**Purification Note**

By protein-A affinity chromatography

**Application**

ELISA, WB

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## Usage

The antibody has been tested by ELISA analysis to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.

## Storage

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

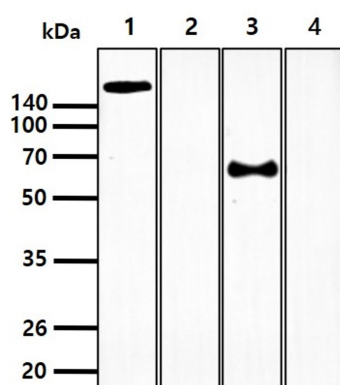
MERS-CoV, which causes the Middle East Respiratory Syndrome (MERS), belongs to a family of viruses known as coronaviruses. MERS-CoV was first identified in the Kingdom of Saudi Arabia in 2012, which is a single and positive stranded RNA virus. Dromedary camels are widely considered as the source of the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

### 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

### Western blot analysis (WB)



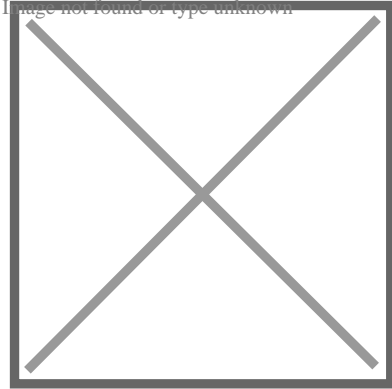
The recombinant proteins (50ng) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-MERS Spike S2 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.

- Lane 1.: Recombinant MERS Spike protein (ATGP3979)
- Lane 2.: Recombinant MERS Spike S1 protein (ATGP3980)
- Lane 3.: Recombinant MERS Spike S2 protein (ATGP3981)
- Lane 4.: Recombinant MERS Spike RBD protein (ATGP3982)

### Additional Information

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ELISA: MERS Spike S2 Antibody (1ug/ml) specifically recognizes MERS Spike and Spike S2 recombinant protein, but not interacted MERS Spike S1 and RBD recombinant protein in ELISA. {ATGA0593-Addpic.jpg}