# MERS-CoV Spike antibody

Catalog Number: ATGA0600

## PRODUCT INFORMATION

**Catalog number**
ATGA0600

**Clone No.**
AT14F8

**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, MERSCoV SP, Spike glycoprotein, S glycoprotein, S, Spike protein

**Additional Information**
14F8 mAb showed broad neutralizing activity, but it did not neutralize pseudovirions with the mutation at 529 amino acid residue (I529 T) identified in 2015 Korea outbreak patients compared with the EMC/2012 strain S sequence. (Virus Res. 2020 Mar 278:197863)

## PRODUCT SPECIFICATION

**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 (18-1296aa) purified from Baculovirus

**Isotype**
IgG1 kappa

**Purification Note**
By protein-A affinity chromatography

**Application**
ELISA

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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 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-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

### Additional Information

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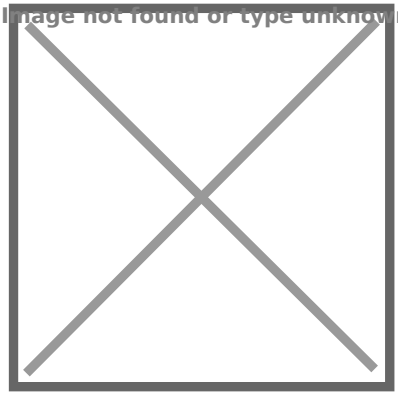

ELISA: MERS Spike Antibody (1ug/ml) specifically recognizes MERS Spike, Spike S1 and RBD recombinant protein, but not interacted MERS Spike S2 recombinant protein in ELISA.{ATGA0600-Addpic.jpg}