

MERS-CoV Spike antibody

Catalog Number: ATGA0599

PRODUCT INFORMATION

Catalog number

ATGA0599

Clone No.

AT43E4

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

43E4 mAb showed broad neutralizing activity, but it could not neutralize the pseudovirions with changes in the amino acid residue at 506, 510, and particularly at 509 site (D509 G) 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

IgG2b kappa

Purification Note

By protein-A affinity chromatography

Application

ELISA

MERS-CoV Spike antibody

Catalog Number: ATGA0599

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

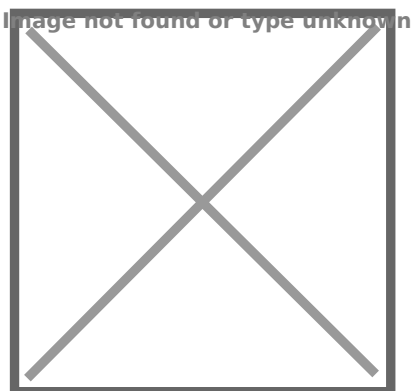
MERS-CoV, which causes the Middle East Respiratory Syndrome (MERS), belongs to a family of viruses known as coronaviruses. MERS-CoV was first identified in the Kingdom of Saudi Arabia in 2012, which is a single and positive stranded RNA virus. Dromedary camels are widely considered as the source of the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

Additional Information



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. {ATGA0599-Addpic.jpg}