# **PRODUCT INFORMATION**

Catalog number ATGA0594

Clone No. AT40G7

Product type Monoclonal antibody

**UnitProt No.** KOBRG7

NCBI Accession No. AFS88936

#### **Alternative Names**

Middle East respiratory syndrome coronavirus, Human betacoronavirus 2c EMC/2012, MERS-CoV, MERS, MERS-CoV SP, Spike glycoprotein, S glycoprotein, S, Spike protein

#### **Additional Information**

40G7 mAb showed broad neutralizing activity. (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

#### 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

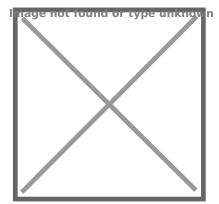
MERS-CoV, which causes the Middles East Respiratory Syndrome (MERS), belongs to a family of viruses known as coronaviruses. MERS-CoV was first identified in the Kingdom of Saudi Arabia in 2012, which is a single and positive stranded RNA virus. Dromedary camels are widely considered as the source of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



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. {ATGA0594-Addpic.jpg}

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