

MERS-CoV (NCoV / Novel coronavirus) Spike

Antibody, Rabbit MAb

Catalog Number: 40069-R723



Sino Biological
Biological Solution Specialist

General Information	
Immunogen:	Recombinant MERS-CoV (NCoV / Novel coronavirus) Spike Protein (ECD, aa 1-1297) (Catalog#40069-V08B)
Clone ID:	723
Ig Type:	Rabbit IgG
Applications:	Microneutralization (MN) (Antibody's applications have not been validated with corresponding viruses. Optimal concentrations/dilutions should be determined by the end user.)
Specificity:	The antibody reacts with MERS-CoV (NCoV / Novel coronavirus) full-length Spike protein (S protein).
Formulation:	0.2 µm filtered solution in PBS, pH7.4
Storage:	< -20°C

Preparation

This antibody was obtained from a rabbit immunized with purified, recombinant recombinant MERS-CoV (NCoV / Novel coronavirus) Spike Protein (Catalog#40069-V08B; AFS88936.1; Met1-Trp1297).

Storage

This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. **Preservative-Free.**

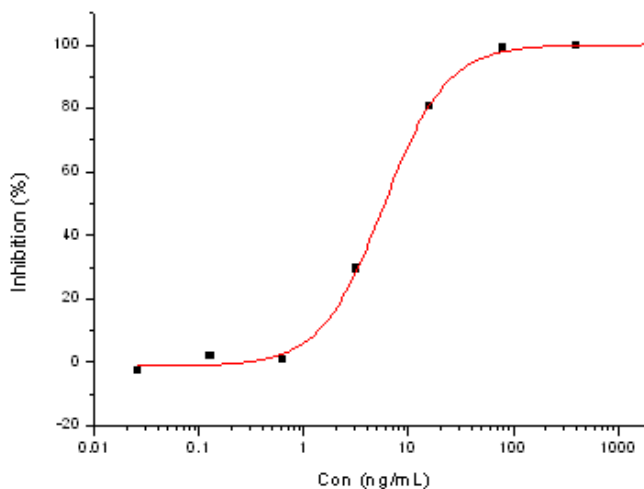
Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. **Avoid repeated freeze-thaw cycles.**

Applications

Microneutralization (MN)

(Antibody's applications have not been validated with corresponding viruses. Optimal concentrations/dilutions should be determined by the end user.)

Microneutralization – Measured by its ability to inhibit infection of Caco-2 cells induced by MERS-CoV pseudovirus. The ED50 for this effect is 2.5-11 ng/mL.



Specificity

The antibody reacts with MERS-CoV (NCoV / Novel coronavirus) full-length Spike protein (S protein).

Has cross-reactivity in ELISA with
MERS-CoV Spike Protein (aa 1-1297, 40069-V08B)
MERS-CoV Spike Protein S1 (aa 1-725, 40069-V08B1)
MERS-CoV Spike Protein RBD (aa 367-606, 40071-V31B1)

No cross-reactivity in ELISA with
MERS-CoV Spike Protein S2 (aa 726-1296, 40070-V08B)

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Background

The spike protein is one of the four major structural proteins of the coronavirus. Coronavirus entry is mediated by the viral spike protein. The 180-kDa oligomeric spike protein of the murine coronavirus mouse hepatitis virus strain A59 is posttranslationally cleaved into an S1 receptor binding unit and an S2 membrane fusion unit. Both biochemical and functional data show that the coronavirus spike protein is a class I viral fusion protein.

HCoV-EMC is a novel coronavirus isolated from a Saudi patient presenting with pneumonia and renal failure in June 2012. Genome sequencing showed that this virus belongs to the group C species of the genus betacoronavirus and phylogenetically related to the bat coronaviruses HKU4 and HKU5 previously found in lesser bamboo bat and Japanese Pipistrelle bat of Hong Kong respectively. HCoV-EMC has been identified as a highly lethal virus that could be passed from animals to humans very easily. The virus, like other coronaviridae, has the potential to infect bats and pigs in addition to humans. HCoV-EMC is related to the causative agent of SARS (severe acute respiratory syndrome), SARS coronavirus, and also may be even more infectious as it does not use the human receptor protein ACE2. The receptor used by HCoV-EMC has not been identified. Symptoms of infection include kidney failure and severe pneumonia. The animal source has still not been identified but may circulate among populations of bats.

Reference

1. Sander van Boheemen. et al., 2012, mBio. 3 (6): e00473-12.
2. Muller M A. et al., 2012, mBio 3 (6): e00515-12.
3. Chan JF. et al., 2012, J Infect. 65 (6): 477-89.