

## Anti-Human coronavirus spike glycoprotein Monoclonal Antibody

### E-AB-V1251

|                    |   |                  |       |
|--------------------|---|------------------|-------|
| <b>Application</b> | ELISA                                       | <b>Host</b>      | Mouse |
| <b>Storage</b>     | Store at -20°C. Avoid freeze / thaw cycles. | <b>Clone No.</b> | 07    |

**Important Note** Centrifuge before opening to ensure complete recovery of vial contents.

### Product Details

|                                |  |
|--------------------------------|--|
| <b>Immunogen</b>               | Recombinant HCoV-HKU1 (Isolate N1) S1 Protein (His Tag)  |
| <b>Isotype</b>                 | IgG1   |
| <b>Host</b>                    | Mouse  |
| <b>Clone No.</b>               | 07   |
| <b>Reactivity</b>              | HCoV-HKU1  |
| <b>Dilution</b>                | ELISA 1:1000-1:2000  |
| <b>Storage Buffer</b>          | 0.2 µm filtered solution in PBS  |
| <b>Stability &amp; Storage</b> | Ships on ice packs. Store at -20°C   |
| <b>Description</b>             | This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified Recombinant HCoV-HKU1 (Isolate N1) S1 Protein (His Tag). And the antibody was purified by Protein A affinity |

### Antigen Information

|                        |  |
|------------------------|--|
| <b>Alternate Names</b> | spike  |
| <b>Background</b>      | The spike (S) glycoprotein of coronaviruses contains protrusions that will only bind to certain receptors on the host cell. Known receptors bind S1 are ACE2, angiotensin-converting enzyme 2; DPP4, dipeptidyl peptidase-4; APN, aminopeptidase N; CEACAM, carcinoembryonic antigen-related cell adhesion molecule 1; Sia, sialic acid; O-ac Sia, O-acetylated sialic acid. The spike is essential for both host specificity and viral infectivity. The term 'peplomer' is typically used to refer to a grouping of heterologous proteins on the virus surface that function together. The spike (S) glycoprotein of coronaviruses is known to be essential in the binding of the virus to the host cell at the advent of the infection process. It's been reported that SARS-CoV-2 (COVID-19 coronavirus, 2019-nCoV) can infect the human respiratory epithelial cells through interaction with the human ACE2 receptor. The spike protein 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. The S protein plays key parts in the induction of neutralizing-antibody and T-cell responses, as well as protective immunity. The main functions for the Spike protein are summarized as: Mediate receptor binding and membrane fusion; Defines the range of the hosts and specificity of the virus; Main component to bind with the neutralizing antibody; Key target for vaccine design; Can be transmitted between different hosts through gene recombination or mutation of the receptor binding domain (RBD), leading to a higher mortality rate. |

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Applications: Activ- Activation; Block- Blocking; Separation- Cell Separation ; Cell Sep-Neg- Cell Separation by Negative Selection; FA- Functional Assay; Neut- Neutralization; Stim- Stimulation; FCM- Flow Cytometry; ICFM: Intracellular Staining for Flow Cytometry; WB- Western Blotting; IHC- Immunohistochemistry; IF- Immunofluorescence; IP- Immunoprecipitation