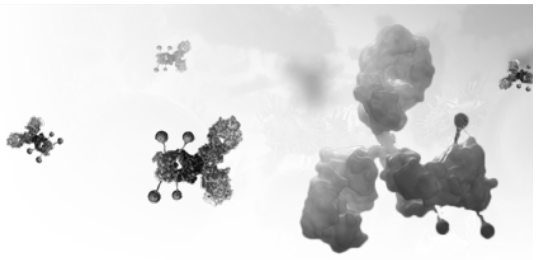

# Chimeric Mouse Anti-SARS-CoV-2 Spike monoclonal antibody, clone E112 (CABT-L002C)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

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| **Specificity** | SARS-CoV-2 spike |
| **Target** | SARS-CoV-2 spike |
| **Immunogen** | Recombinant SARS-CoV Spike RBD Protein |
| **Source/Host** | Mouse |
| **Species Reactivity** | N/A |
| **Clone** | E112 |
| **Purification** | Protein A |
| **Conjugate** | Unconjugated |
| **Applications** | ELISA, Neutralization, FC<br>ELISA: 1:5000-1:10000<br>FC: 1:25-1:100<br>Neutralization:The neutralization activity is Measured by microneutralization assay in vitro. The virus microneutralizaiton (MN) test was performed on 293T-ACE2 cells infected with SARS-CoV-2 (2019- nCoV) Spike Pseudovirus under treatment of serial dilutions of neutralizing antibody. The infection was neutralized by increasing concentrations of Anti-SARS-CoV-2 Neutralizing Antibody. |
| **Preparation** | It is a chimeric monoclonal antibody combining the constant domains of the human IgG1 molecule with mouse variable regions. The variable region was obtained from a mouse immunized with purified, recombinant SARS-CoV Spike RBD Protein. The antibody was |

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| | produced using recombinant antibody technology. |
| **Format** | Liquid |
| **Concentration** | Lot specific |
| **Size** | 50 µl, 100 µl |
| **Buffer** | 0.2 µm filtered solution in PBS |
| **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. Avoid repeated freeze-thaw cycles. |
| **Ship** | This antibody is shipped as liquid solution at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. |

# BACKGROUND

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| **Introduction** | 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. |

# GENE INFORMATION

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| **Synonyms** | coronavirus spike; novel coronavirus RBD; Spike RBD |

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