



Mouse anti-MERS-CoV S1 monoclonal antibody, clone MN2163 (CABT-RM313)

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

PRODUCT INFORMATION

Specificity	MERS Coronavirus Spike Protein S1 domain, No reactivity with SARS Coronavirus
Target	MERS Coronavirus
Isotype	IgG2a
Source/Host	Mouse
Species Reactivity	MERS Coronavirus
Clone	MN2163
Conjugate	unconjugated
Applications	ELISA, IF
Size	1 mg
Buffer	10 mM Phosphate Buffered Saline, pH 7.2
Preservative	0.1% Sodium Azide
Storage	Short Term: 2-8°C. Long Term: -20°C. Avoid repeated freezing and thawing.

BACKGROUND

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 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.

Keywords

MERS; MERS-CoV; NCoV; Novel coronavirus; Coronavirus; Corona; Coronaviridae; Coronavirinae; Middle East respiratory symptom coronavirus; Spike Protein; Middle East respiratory symptom coronavirus Spike Protein; MERS-CoV Spike protein; MERS-CoV Spike Protein S1; Spike protein S1 subunit
