

Anti-Spike (SARS-CoV-2) Mouse Monoclonal Antibody

CATALOG NUMBER: SCV2-S1-21m, 100 µg

Introduction

The novel coronavirus (SARS-CoV-2), previously called 2019-nCoV, is a newly identified coronavirus causing the ongoing outbreak of atypical pneumonia in Wuhan China from late 2019.

The genome of SARS-CoV-2 has 89% nucleotide identity with bat SARS-like-CoVZXC21 and 82% with that of human SARS-CoV. The phylogenetic trees of their orf1a/b, Spike, Envelope, Membrane and Nucleoprotein also clustered closely with those of the bat, civet and human SARS coronaviruses. However, the external subdomain of Spike's receptor binding domain (RBD) of SARS-CoV-2 shares only 40% amino acid identity with other SARS-related coronaviruses.

Applications

Western blot (1:1,000-1:2,000) and ELISA (1:5,000-10,000). May be used for other applications.

Description

Mouse monoclonal anti-SARS-CoV-2 Spike antibody expressed and purified from XtenCHO cells. (The sequence was obtained by sequencing peripheral blood lymphocytes of a patient exposed to the SARS-CoV).

Specificity

Reacts with SARS-CoV-2 S1 protein from coronavirus SARS-CoV-2 (see Figure 1). Neutralization assays using the MMLV viral membrane particles pseudotyped with the spike proteins of different SARS-CoV-2 variants or SARS-1 strain showed that this antibody inhibits the infection of virus of HEK293-ACE2 cells via the spike-ACE2 path (see selected results in Figure 3 below.)

Purification

Affinity chromatography

Clone

3022, mouse recombinant monoclonal

Isotype

Mouse IgG1 (Kappa)

Storage

Store at -20 °C; Stable for 6 months from the date of shipment when kept at 4 °C.

Concentration

1 µg/µl in PBS

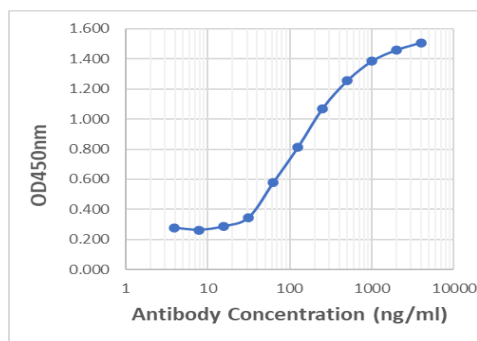


Figure 1. Titration curves of anti-Spike (SARS-CoV-2) mouse monoclonal antibody.
96-well corning ELISA plate was coated with SARS-CoV-2 spike S1 protein (Cat# [SCV2-S1-150P](#)) at a concentration of 1.5 µg/ml.



Figure 2. Western blot of SARS-CoV-2 spike proteins using anti-Spike mouse monoclonal antibody (Cat# SCV2-S1-21m) (1:2000 dilution)

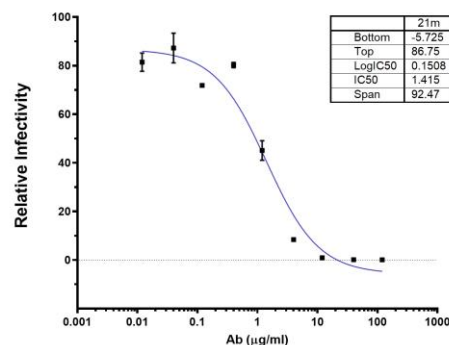


Figure 3. Pseudoviral particle (PP) neutralization assay on the neutralizing antibody SCV2-S1-21m.
HEK293-ACE2 cells infected with SARS-CoV-2 pseudoviral particles of the 614G variant ([SCV2-PsV-614G](#)) under various amount of the antibody.