PRODUCT INFORMATION

SARS-CoV-2 Surface Glycoprotein Rabbit Monoclonal Neutralizing Antibody (Clone 004)

Item No. 33627

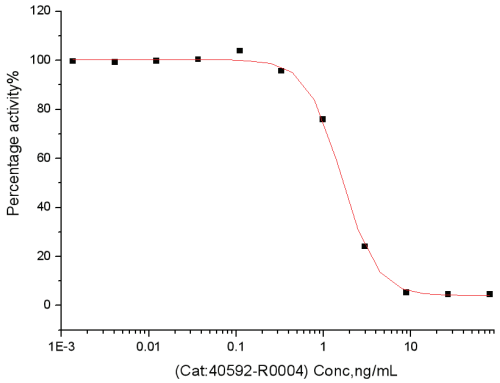
Overview and Properties

Contents: This vial contains 100 µg of protein A-purified monoclonal antibody.
Synonyms: 2019-nCoV Spike Glycoprotein, 2019-nCoV Surface Glycoprotein, COVID-19 Spike Glycoprotein, COVID-19 Surface Glycoprotein, SARS-CoV-2 Spike Glycoprotein, Severe Acute Respiratory Syndrome Coronavirus 2 Surface Glycoprotein
Immunogen: Recombinant SARS-CoV-2 Surface Glycoprotein RBD-mFc Protein
Species Reactivity: (+) SARS-CoV-2, HCoV-HKU1 (isolate N1); (-) SARS-CoV, MERS-CoV, HCoV-HKU1 (isolate N5), HCoV-NL63, HCoV-229E, HCoV-OC4
Form: Liquid
Storage: -20°C (as supplied)
Stability: ≥1 year
Storage Buffer: 0.2 µm filtered solution in PBS
Clone: 004
Host: HEK293 cells
Isotype: IgG
Applications: ELISA; the recommended starting concentration for ELISA is 0.1-0.2 µg/ml. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images

Conc. (µg/mL)	Inhibition%
100	99.46%
20	99.38%
4	99.43%
0.8	92.12%
0.16	36.98%
0.032	41.77%
0.0064	37.85%
0.00128	26.33%

The neutralization activity was measured in a microneutralization (MN) assay *in vitro*. The virus MN test was performed on 293T-ACE2 cells infected with SARS-CoV-2 spike pseudovirus under treatment of serial dilutions of neutralizing antibody. The infection was neutralized by increasing concentrations of SARS-CoV-2 Surface Glycoprotein Rabbit Monoclonal Neutralizing Antibody (Clone 004). The rate of inhibition was determined by comparing the relative light units (RLUs) of a luciferase reporter in different antibody concentrations. The IC_{50} value was approximately 0.234 µg/ml.



Serial dilutions of SARS-CoV-2 Surface Glycoprotein Rabbit Monoclonal Neutralizing Antibody (Clone 004) were detected using a SARS-CoV-2 Inhibitor Screening ELISA Kit. The IC_{50} value was approximately 1.61 nM.

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Description

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is an enveloped positive-stranded RNA virus, a member of the *Betacoronavirus* genus, and the causative agent of COVID-19.[1-5] The SARS-CoV-2 surface glycoprotein, also known as the spike glycoprotein, is located on the outer envelope of the virion.[1] It is composed of an S1 and S2 subunit divided by a furin S-cleavage site not found in other SARS-CoVs.[6,7] The S1 subunit contains the receptor-binding domain (RBD), which binds to the carboxypeptidase angiotensin-converting enzyme 2 (ACE2), and the S1 and S2 subunits are cleaved by the protease TMPRSS2 to facilitate viral fusion with the host cell membrane.[8-10] In this way, ACE2 acts as the functional receptor for SARS-CoV-2. SARS-CoV-2 infection can result in the production of neutralizing antibodies, which bind to the SARS-CoV-2 spike RBD preventing further viral entry and infection, starting approximately 4-10 days after symptom onset.[11,12] Cayman's SARS-CoV-2 Surface Glycoprotein Rabbit Monoclonal Neutralizing Antibody (Clone 004) disrupts the S1-RBD-ACE2 interaction and can be used for ELISA.

References

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