

SARS-CoV-2 (COVID-19) Membrane Antibody (biotin)

Infectious Disease, COVID-19

Catalog # ASC12199

Product Information

Application	E
Other Accession	QJW69073
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Clone Names	M
Concentration (mg/ml)	1 mg/mL
Conjugate	biotin

Additional Information

Gene ID	43740571
Alias Symbol	M
Other Names	SARS-CoV-2/SARS-CoV Matrix Antibody: SARS-CoV-2 Matrix protein, SARS Matrix protein, Membrane protein, E1 glycoprotein, M protein
Reconstitution & Storage	SARS-CoV-2 (COVID-19) Membrane antibody can be stored at 4 ° C for three months and -20 ° C, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	SARS-CoV-2 (COVID-19) Membrane Antibody (biotin) is for research use only and not for use in diagnostic or therapeutic procedures.

Background

Coronavirus disease 2019 (COVID-19), formerly known as 2019-nCoV acute respiratory disease, is an infectious disease caused by SARS-CoV-2, a virus closely related to the SARS virus. The disease is the cause of the 2019–20 coronavirus outbreak (1). SARS-CoV-2 is the seventh member of the enveloped, positive-stranded RNA viruses that are able to infect humans. The SARS-CoV-2 genome, like other coronaviruses, encodes for multiple structural and nonstructural proteins. The structural proteins include spike protein (S), envelope protein (E), membrane glycoprotein (M), nucleocapsid phosphoprotein (N), and the nonstructural proteins include open reading frame 1ab (ORF1ab), ORF3a, ORF6, ORF7a, ORF8, and ORF10 (2). The membrane (M) protein or matrix protein is the most abundant structural protein and defines the shape of the viral envelope (3). It is an integral membrane protein involved in the budding of the viral particles and interacts with S (Spike) protein. It involves in organization of the nucleoprotein inside, which includes many copies of the N (nucleocapsid) protein bound to the genomic RNA. The M protein holds dominant cellular immunogenicity and has been determined as a protective antigen in humoral responses, which suggests it would serve as a potential target in vaccine design (4).

References

Zhu et al. N Engl J Med. 2020 Feb 20;382(8):727-733.
Kiyotani et al. J Hum Genet. 2020 Jul;65(7):569-575
Neuman et al. J Struct Biol. 2011;174(1):11-22.
Liu et al. J Infect Dis. 2010;202(8):1171-80.

Images

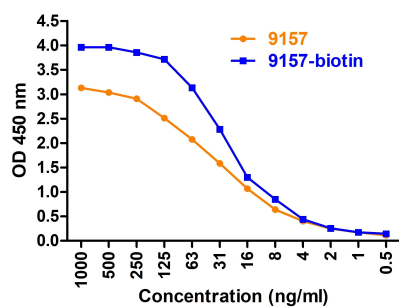


Figure 1 ELISA Validation

Coating Antigen: immunogen peptide, 9157P, 10 µg/mL, incubate at 4 °C overnight. Detection Antibodies: SARS-CoV-2 Spike antibody, ASC12199 or 9157, dilution: 0.5-1000 ng/mL, incubate at RT for 1 hr. ASC12199 was detected by HRP-conjugated streptavidin at 1:5,000 and 9157 was detected by anti-rabbit HRP conjugated secondary antibodies at 1:10,000 , incubate at RT for 1 hr.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.