

SARS-CoV-2 (COVID-19) Nucleocapsid Antibody (HRP)

Infectious Disease, COVID-19

Catalog # ASC12198

Product Information

Application	E
Other Accession	QHD43423
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Clone Names	N
Concentration (mg/ml)	1 mg/mL
Conjugate	HRP

Additional Information

Gene ID	43740575
Alias Symbol	N
Other Names	SARS-CoV-2 (COVID-19) Nucleocapsid antibody: Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), Nucleocapsid protein, N protein, Nucleocapsid Phosphoprotein
Reconstitution & Storage	SARS-CoV-2 (COVID-19) Nucleocapsid 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) Nucleocapsid Antibody (HRP) 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). Nucleocapsid (N) protein is the most abundant protein of coronavirus. It is also one of the major structural proteins and is involved in the transcription and replication of viral RNA, packaging of the encapsidated genome into virions (3), and interference with cell cycle processes of host cells (4). Moreover, in many coronaviruses, including SARS-CoV, the N protein has high immunogenic activity and is abundantly expressed during infection (5). It can be detected in various patient samples including nasopharyngeal aspirate, urine, and fecal. Both S and N proteins may be potential antigens for serodiagnosis of COVID-19, just as many diagnostic methods have been developed for diagnosing SARS based on S and/or N proteins (6).

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.
Chang et al. J Biomed Sci. 2006 Jan;13(1):59-72.
Cui et al. J Virol. 2015 Sep;89(17):9029-43.
Chen et al. Eur J Clin Microbiol Infect Dis. 2005 Aug;24(8):549-53.
Emerg Infect Dis. 2004 Sep;10(9):1558-62.

Images

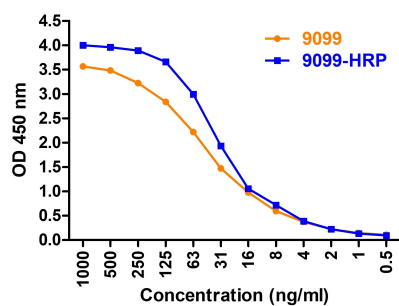


Figure 1 ELISA Validation

Coating Antigen: immunogen peptide, 9099P, 10 µg/mL, incubate at 4 °C overnight. Detection Antibodies: SARS-CoV-2 Spike antibody, ASC12198 or 9099, dilution: 0.5-1000 ng/mL, incubate at RT for 1 hr. 9099 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'.