

PRODUCT INFORMATION

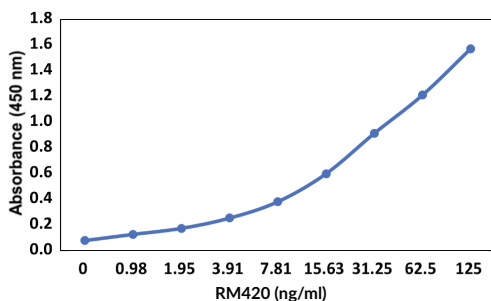
SARS-CoV-2 Nucleocapsid Rabbit Monoclonal Antibody (Clone RM420)

Item No. 42859

Overview and Properties

Contents:	This vial contains 100 µg of protein A-affinity purified monoclonal antibody
Synonyms:	2019-nCoV NP, 2019-nCoV Nucleocapsid Protein, 2019-nCoV Nucleoprotein, COVID-19 NP, COVID-19 Nucleocapsid Protein, COVID-19 Nucleoprotein, SARS-CoV-2 NP, SARS-CoV-2 Nucleoprotein, Severe Acute Respiratory Syndrome Coronavirus 2 Nucleocapsid Protein
Immunogen:	Recombinant SARS-CoV-2 nucleocapsid protein
Cross Reactivity:	(+) SARS-CoV-2 nucleocapsid protein; (-) Other common coronaviruses
Species Reactivity:	(+) SARS-CoV-2
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol and 0.09% sodium azide
Concentration:	1.0 mg/ml
Clone:	RM420
Isotype:	IgG
Applications:	ELISA (sandwich) paired with SARS-CoV-2 Nucleocapsid Chimeric Human Monoclonal Antibody (Clone RMH03); the optimal working concentration/dilution should be determined empirically.

Image



Binding curve of SARS-CoV-2 Nucleocapsid Rabbit Monoclonal Antibody (Clone RM420) and recombinant SARS-CoV-2 Nucleocapsid Protein. ELISA plate was coated with 50 ng recombinant SARS-CoV-2 Nucleocapsid Protein at concentration of 1 µg/ml. A 2-fold serial dilution from 125 ng/ml was performed using SARS-CoV-2 Nucleocapsid Rabbit Monoclonal Antibody (Clone RM420). For detection, a AP-conjugated goat anti-rabbit IgG secondary antibody was used.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Description

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) nucleocapsid protein is a viral protein encoded by the *N* gene in SARS-CoV-2 RNA.¹ SARS-CoV-2 is a member of the *Betacoronavirus* genus of viruses and has 88% sequence identity with two bat-derived SARS-like CoVs.² SARS-CoV-2 nucleocapsid protein is composed of an N-terminal domain (NTD) that binds RNA, a disordered linker region that contains regulatory phosphorylation sites, a C-terminal domain (CTD) that mediates dimerization, and a C-terminal tail.³ In a similar virus, SARS-CoV, the nucleocapsid protein packages the viral RNA into a helical ribonucleoprotein (RNP) complex that is a template for viral replication.⁴ The SARS-CoV nucleocapsid protein is integral for viral self-assembly and is involved in cell cycle regulation. The SARS-CoV-2 nucleocapsid protein gene sequence is greater than 90% similar to the SARS-CoV nucleocapsid protein, and it contains 27 T cell epitopes that are identical to SARS-CoV T cell epitopes.⁴ SARS-CoV-2 nucleocapsid protein inhibits the formation of stress granules, which sequester viral factors and are involved in the host antiviral response.⁵ SARS-CoV-2 is the causative agent of COVID-19, a primarily respiratory illness characterized by fever, cough, and shortness of breath that can lead to life-threatening complications.⁶⁻⁸ Cayman's SARS-CoV-2 Nucleocapsid Rabbit Monoclonal Antibody (Clone RM420) can be used as a capture antibody paired with the detection antibody SARS-CoV-2 Nucleocapsid Chimeric Human Monoclonal Antibody (Clone RMH03) (Item No. 42860) in sandwich ELISAs.

References

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