PRODUCT INFORMATION

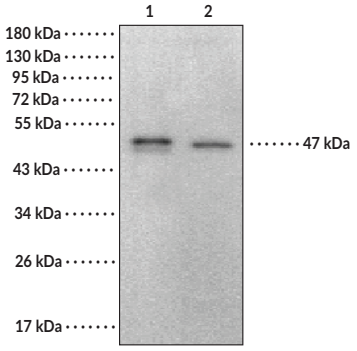
SARS-CoV-2 Nucleocapsid Protein Rabbit Monoclonal Antibody (Clone 0004)

Item No. 31801

Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	SARS-CoV-2 NP, SARS-CoV-2 Nucleoprotein, Severe Acute Respiratory Syndrome Coronavirus 2 Nucleocapsid Protein, COVID-19 NP, COVID-19 Nucleoprotein, COVID-19 Nucleocapsid Protein, 2019-nCoV NP, 2019-nCoV Nucleoprotein, 2019-nCoV Nucleocapsid Protein
Immunogen:	Recombinant SARS-CoV-2 nucleocapsid protein
Cross Reactivity:	(+) Nucleocapsid protein
Species Reactivity:	(+) SARS-CoV-2, SARS-CoV-2 Omicron (B.1.1.529), SARS-CoV-2 Omicron (BA.2), SARS-CoV-2 Omicron XE (BA.1 x BA.2), SARS-CoV-2 Omicron (BA.4), SARS-CoV, MERS-CoV; (-) HCoV-229E, HCoV-NL63, HCoV-HKU1, HCoV-OC43, Influenza A H1N1 (A/California/07/2009), Influenza A H3N2 (A/Switzerland/9715293/2013), Influenza A H2N2 (A/Ann Arbor/6/1960), Influenza A H7N9 (A/Shanghai/2/2013), Influenza B (B/Florida/4/2006))
MW:	~47 kDa
Form:	Liquid
Storage:	-80°C (as supplied)
Stability:	≥1 year
Storage Buffer:	0.2 µm filtered solution in PBS
Clone:	004
Host:	Rabbit
Isotype:	IgG
Applications:	ELISA and Western blot (WB); the recommended starting concentration is 1:5,000-1:10,000 for ELISA and 1:500-1:2,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Image



Lane 1: SARS-CoV-2 Nucleocapsid Protein Rabbit Monoclonal Antibody (Clone 0004) (30 ng)
Lane 2: MERS-CoV Nucleocapsid (30 ng)

WB of SARS-CoV-2 Nucleocapsid Protein Rabbit Monoclonal Antibody (Clone 0004) at 1:10,000 dilution.

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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.[5] SARS-CoV-2 nucleocapsid protein inhibits the formation of stress granules, which sequester viral factors and are involved in the host antiviral response.[6] 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.[7-9] Cayman's SARS-CoV-2 Nucleocapsid Protein Rabbit Monoclonal Antibody (Clone 0004) can be used for ELISA and Western blot (WB) applications. This recombinant antibody recognizes nucleocapsid protein at 45.6 kDa from SARS-CoV-2, several SARS-CoV-2 Omicron subvariants, SARS-CoV, and Middle East respiratory syndrome coronavirus (MERS-CoV).

References

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