

Purified anti-SARS-CoV-2 Nucleocapsid Antibody

Catalog# / Size	940901 / 25 µg 940902 / 100 µg
Clone	A20087F
Regulatory Status	RUO
Other Names	Nucleocapsid phosphoprotein, N, Nucleoprotein
Isotype	Mouse IgG2b, κ
Description	<p>Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) is a single stranded RNA virus that belongs in a family of viruses known as coronaviruses. SARS-CoV-2 infection, known as COVID-19, was declared a pandemic in 2020 and among other symptoms leads to respiratory infection, pulmonary failure which can be fatal. SARS-CoV-2 is structurally composed of 4 main proteins (e.g. spike glycoprotein, envelope glycoprotein, membrane glycoprotein and nucleocapsid protein) and several accessory proteins.</p> <p>The SARS-CoV-2 Nucleocapsid (N) is an abundant protein, that binds to the viral RNA and helps stabilize it. It has been proposed that N protein forms bimolecular condensates that both regulate viral replication and modulate the host response to the virus following infection. N protein is a major antigen that the host immune response is directed to following SARS CoV-2 infection making it a promising candidate for vaccine development and drug therapy.</p>

Product Details

Verified Reactivity	SARS-CoV-2
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	SARS-CoV-2 nucleocapsid recombinant protein
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/mL
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	WB - Quality tested Direct ELISA - Verified
Recommended Usage	Each lot of this antibody is quality control tested by western blotting. For western blotting, the suggested use of this reagent is 0.125 - 1.0 µg/mL. For the Direct ELISA application, a concentration of 2.5 ng/mL is recommended. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	SARS-CoV-2 is 90% homologous to SARS-CoV. Cross reactivity of anti-SARS-CoV-2 nucleocapsid antibody (clone A20087F) with SARS-CoV has not been tested.
RRID	AB_2888743 (BioLegend Cat. No. 940901) AB_2888743 (BioLegend Cat. No. 940902)

Antigen Details

Structure	SARS-CoV-2 is a 419 amino acid protein with an expected molecular weight of 46 kD.
Distribution	Viral nucleoprotein, host cell Golgi apparatus
Function	RNA binding, transcription regulation

Biology Area

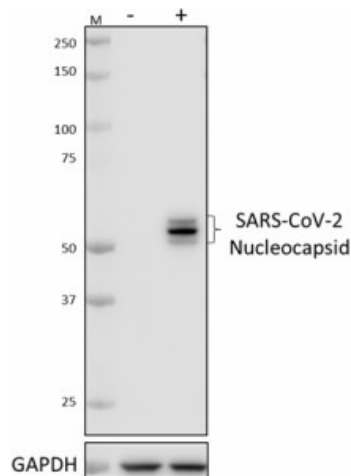
COVID-19

Antigen References

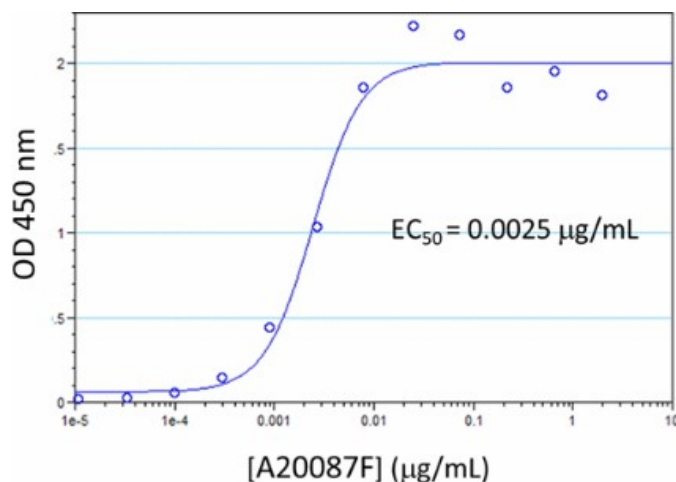
1. Zeng W, *et al.* 2020. *Biochem Biophys Res Commun.* 527:618-623.
2. Yoshimoto FK. 2020. *Protein J.* 39:198-216.
3. Cascarina SM & Ross ED. 2020. *FASEB J.* fj.202001351.

Gene ID[43740575](#)**Related Protocols**[Active Protocols: Sandwich ELISA - Video](#)[Western Blotting Protocol](#)[Sandwich ELISA Protocol](#)**Other Formats**

Purified anti-SARS-CoV-2 Nucleocapsid

Product Data

Whole cell extracts (15 µg total protein) from 293E cells untransfected (-) or transfected with SARS-CoV-2 nucleocapsid (+) were resolved by 4-12% Bis-Tris gel electrophoresis, transferred to a PVDF membrane, and probed with 1.0 µg/mL (1:500 dilution) purified anti-SARS-CoV-2 nucleocapsid antibody (clone A20087F) overnight at 4°C. Proteins were visualized by chemiluminescence detection using HRP goat anti-mouse IgG antibody (Cat. No. 405306) at a 1:3000 dilution. Direct-Blot™ HRP anti-GAPDH antibody (Cat. No. 607904) was used as a loading control at a 1:25000 dilution (lower). Lane M: Molecular weight marker.



Recombinant nucleocapsid protein coated onto Costar™ 96-well, high binding assay plate at 2 µg/mL was incubated with a dilution series of purified anti-SARS-CoV-2 nucleocapsid antibody (clone A20087F). Bound antibodies were detected with HRP-goat anti-mouse IgG antibody (Cat. No. 405306) followed by TMB substrate solution. Absorbance was measured at 450 nm.

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