

Purified anti-SARS-CoV-2 Nucleocapsid Antibody

Catalog# / Size	946101 / 25 µg 946102 / 100 µg
Clone	A20087H
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>

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.

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, ICFC - 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 Direct ELISA application, a concentration of 3.7 ng/mL is recommended. For intracellular flow cytometric staining, the suggested use of this reagent is ≤ 0.5 µg per million cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	<p>SARS-CoV-2 is 90% homologous to SARS-CoV. Cross reactivity of anti-SARS-CoV-2 Nucleocapsid antibody (clone A20087H) with SARS-CoV has not been tested.</p> <p>BioLegend offers two clones specific for SARS-CoV-2 nucleocapsid, clones A20087F and A20087H</p> <ul style="list-style-type: none">• Both clones have been verified for western blot, with A20087F showing a higher affinity for SARS-CoV-2 nucleocapsid for this application• Both clones have been verified for direct ELISA and displayed similar EC₅₀ values for this application• A20087H has been verified for ICFC, while A20087F is not recommended for this application
RRID	AB_2892515 (BioLegend Cat. No. 946101) AB_2892515 (BioLegend Cat. No. 946102)

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
Antigen References	<ol style="list-style-type: none">1. Zeng W. <i>et al.</i> 2020. <i>Biochem Biophys Res Commun</i> 527(3):618-623.2. Yoshimoto FK. 2020. <i>Protein J.</i> 39(3):198-216.3. Cascarina SM. & Ross ED. 2020. <i>The FACEB Journal.</i> 34:9832-9842.
Gene ID	43740575

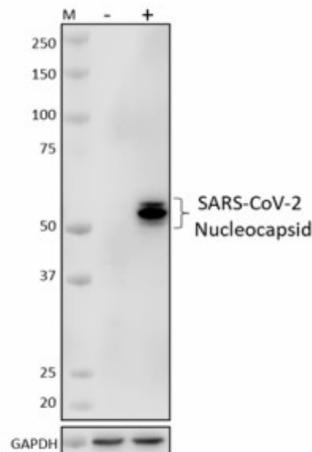
Related Protocols

[Western Blotting Protocol](#)

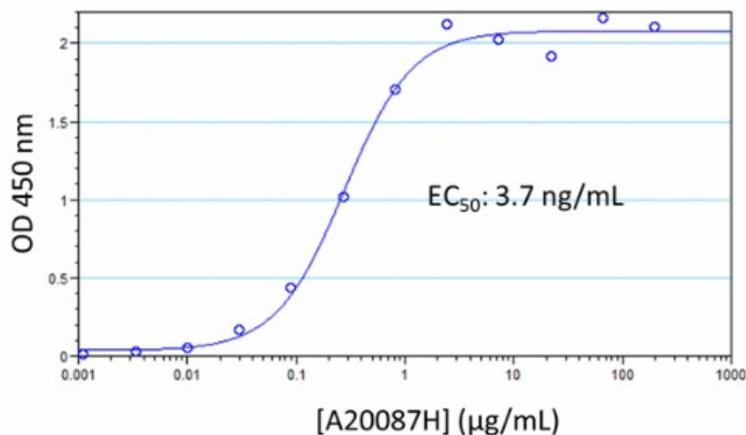
Other Formats

Purified anti-SARS-CoV-2 Nucleocapsid

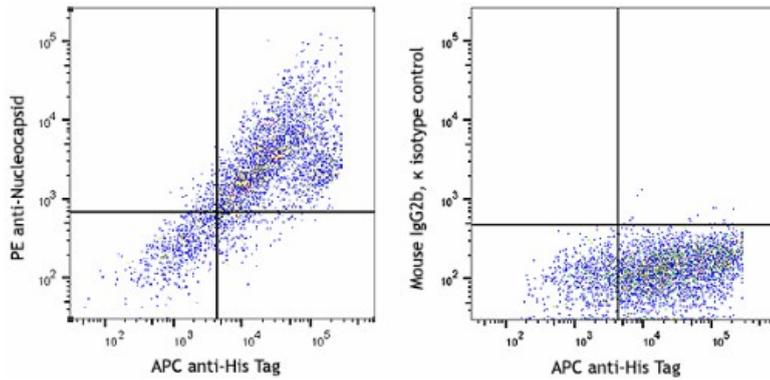
Product Data



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 0.5 µg/mL (1:1000 dilution) of purified anti-SARS-CoV-2 nucleocapsid antibody (clone A20087H) 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 A20087H). 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.



His-tagged SARS-CoV-2 Nucleocapsid transfected CHO cells were stained with anti-Nucleocapsid (clone A20087H) purified (left) or mouse IgG2b, κ isotype control (clone MPC-11) purified (right) followed by anti-mouse IgG2b PE (clone RMG2b-1) and APC anti-His Tag (clone J095G46).

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