

**Monoclonal Anti-SARS-Related  
Coronavirus 2 Nucleocapsid Protein  
(produced *in vitro*)**

**Catalog No. NR-56223**  
**Sino Biological Catalog No. 40143-R019**

**For research use only. Not for use in humans.**

**Contributor and Manufacturer:**

Sino Biological, Wayne, Pennsylvania, USA

**Product Description:**

Antibody Class: IgG

Clone: 019

NR-56223 is a recombinant monoclonal rabbit antibody, prepared against the severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2) nucleocapsid (N) protein (BEI Resources NR-53797; Sino Biological 40588-V08B), that was expressed from HEK293 cells and purified.<sup>1</sup>

**Material Provided:**

Each vial of NR-56223 contains approximately 100 µL of monoclonal antibody in phosphate buffered saline (PBS). The concentration, expressed as milligrams per milliliter, is shown on the Certificate of Analysis.

**Packaging/Storage:**

NR-56223 was packaged aseptically in screw-capped plastic vials and is provided frozen on dry ice. The product should be stored at -20°C to -80°C immediately upon arrival. NR-56223 can be stored at 2°C to 8°C for one month without detectable loss of activity. Freeze-thaw cycles should be avoided.

**Functional Activity:**

NR-56223 is specific to the SARS-CoV-2 nucleocapsid protein as shown in ELISA and western blot analysis (Figure 1), with cross reactivity to the nucleocapsid protein from SARS-CoV (Sino Biological 40143-V08B). No cross reactivity was observed in ELISA with N proteins from MERS-CoV, HCoV-229E, HCoV-NL63, HCoV-HKU1 (isolate N5) or HCoV-OC43. The biological activity of NR-56223 was measured by its binding ability using biosensor analysis (Figure 2), in which biotinylated recombinant SARS-CoV-2 N protein (His tag) (Sino Biological 40588-V08B-B) can bind NR-56223; the affinity constant is 0.05 nM.<sup>1</sup>

**Citation:**

Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: Monoclonal Anti-SARS-Related Coronavirus 2 Nucleocapsid Protein (produced *in vitro*), NR-56223.”

**Biosafety Level: 1**

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and

Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories. 6th ed. Washington, DC: U.S. Government Printing Office, 2020; see [www.cdc.gov/biosafety/publications/bmbl5/index.htm](http://www.cdc.gov/biosafety/publications/bmbl5/index.htm).

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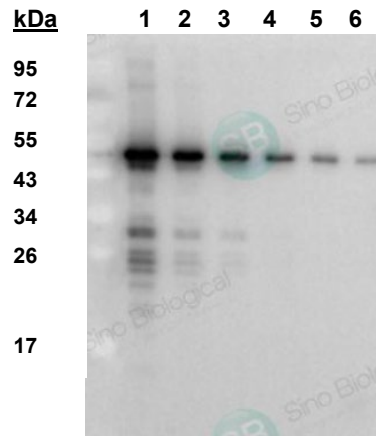
**References:**

1. Lu, Z., Personal Communication.

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**Figure 1: Representative Anti-SARS-CoV-2 Western Blot**



Lane 1: SARS-CoV-2 Nucleocapsid (30 ng)  
 Lane 2: SARS-CoV-2 Nucleocapsid (10 ng)  
 Lane 3: SARS-CoV-2 Nucleocapsid (5 ng)  
 Lane 4: SARS-CoV-2 Nucleocapsid (2 ng)  
 Lane 5: SARS-CoV-2 Nucleocapsid (1 ng)  
 Lane 6: SARS-CoV-2 Nucleocapsid (0.5 ng)

**Figure 2: Representative Biosensor Analysis**

