

**Monoclonal Anti-SARS-Related Coronavirus 2 Spike Glycoprotein, Clone 1-3F2 (produced *in vitro*)**

**Catalog No. NR-56489**

This reagent is the property of the U.S. Government.

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

**Contributor and Manufacturer:**

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**Product Description:**

Antibody Class: IgG1k

Monoclonal antibody prepared against the severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2) spike (S) glycoprotein was purified from clone 1-3F2 hybridoma supernatant by protein G affinity chromatography. The B cell hybridoma was generated by the fusion of Sp2/mL-6 mouse myeloma cells with splenocytes from BALB/c mice immunized with mouse IgG1 Fc domain-tagged receptor binding domain (RBD) protein (residues 319-541).<sup>1,2</sup>

**Material Provided:**

Each vial of NR-56489 contains approximately 100 µL of purified monoclonal antibody in phosphate buffered saline (PBS). The concentration expressed as milligrams per milliliter is shown on the Certificate of Analysis.

**Packaging/Storage:**

NR-56489 was packaged aseptically in screw-capped plastic vials and is provided frozen on dry ice and should be stored at -80°C or colder immediately upon arrival. Freeze-thaw cycles should be avoided.

**Functional Activity:**

NR-56489 is a neutralizing antibody that targets the S glycoprotein of SARS-CoV-2.<sup>1,2</sup> It can bind to mutations N501Y, Y453F, K417N, L452R, E484Q and T478K, equivalent to WT Spike RBD; it shows decreased binding to RBD (L452R and T478K).<sup>1</sup> NR-56489 neutralizes variants Alpha B.1.1.7, Beta B.1.351, Gamma P.1, Delta B.1.617/1/3, B.1.429+E484K/Q equivalent to WT/D614G; it cannot neutralize B.1.617.2.<sup>1</sup>

NR-56489 can be used for applications such as ELISA, western blot and neutralization assays. It binds to both native and denatured spike protein.<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 Spike Glycoprotein, Clone 1-3F2 (produced *in vitro*), NR-56489.”

**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/bmb15/index.htm](http://www.cdc.gov/biosafety/publications/bmb15/index.htm).

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NR-56489 is claimed in International Patent Application No. PCT/US2021/040836 and the continuations, continuations-in-part, re-issues, and foreign counterparts thereof.<sup>3</sup> To obtain a license for commercial use and for additional commercialization or licensing information, please contact Kevin Brand, CDC ([yfb0@cdc.gov](mailto:yfb0@cdc.gov)).

**References:**

1. Goldstein, J., Personal Communication.
2. Chapman, A. P., et al. "Rapid Development of Neutralizing and Diagnostic SARS-COV-2 Mouse Monoclonal Antibodies." Sci. Rep. 11 (2021): 9682. PubMed: 33958613.
3. Finn, M. G., et al. "Compositions and Methods for the Diagnosis and Treatment of SARS-COV-2 Virus Infection." (2021): U.S. Patent Pending [WO2022011110](#).

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