Product Information Sheet for NR-56490

Monoclonal Anti-SARS-Related Coronavirus 2 Spike Glycoprotein, Clone 1-3H2 (produced *in vitro*)

Catalog No. NR-56490

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: IgG1κ
Monoclonal antibody prepared against the severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2) spike (S) glycoprotein was purified from clone 1-3H2 hybridoma supernatant by protein G affinity chromatography. The B cell hybridoma was generated by the fusion of Sp2/mIL-6 mouse myeloma cells with splenocytes from BALB/c mice immunized with mouse IgG1 Fc domain-tagged receptor binding domain (RBD) protein (residues 319 to 541).[1,2]

Material Provided:

Each vial of NR-56490 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-56490 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-56490 is a neutralizing antibody that targets the S glycoprotein of SARS-CoV-2.[1,2] It can bind to mutations N501Y, Y453F, K417N and L452R, equivalent to WT Spike RBD; it shows a reduction or complete loss to binding mutations E484K and E484Q.[1] NR-56490 shows a loss to neutralize variants Alpha B.1.1.7, Beta B.1.351, Gamma P.1, Delta B.1.617.2, B.1.617/1/3 and B.1.429 compared to WT/D614G.[1]

NR-56490 can be used for applications such as ELISA and neutralization assays. It binds to native but not denatured spike protein.[1]

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 1-3H2 (produced *in vitro*), NR-56490."

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.

Disclaimers:

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NR-56490 is claimed in International Patent Application No. PCT/US2021/040836 and the continuations, continuations-in-part, re-issues, and foreign counterparts thereof.[3] To obtain a license for commercial use and for additional commercialization or licensing information, please contact Kevin Brand, CDC (yfb0@cdc.gov).

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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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