

**Monoclonal Anti-SARS-Related Coronavirus 2 Spike Glycoprotein Receptor Binding Domain (RBD), Chimeric Antibody Human IgG1, Clone AM122 (produced *in vitro*)**

**Catalog No. NR-55407**  
**ACROBiosystems Catalog No. S1N-M122**

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

**Contributor and Manufacturer:**  
ACROBiosystems, Newark, Delaware, USA

**Product Description:**

Antibody Class: Human IgG1k  
Clone: AM122

Chimeric monoclonal antibody prepared against the severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV-2) spike (S) glycoprotein receptor binding domain (RBD) was produced in HEK 293 cells, combining the variable region of the mouse monoclonal antibody with human IgG1 constant domain. The mouse monoclonal antibody was obtained from a mouse immunized with recombinant S1 protein.<sup>1</sup> Representative SDS-PAGE results are shown in Figure 1.<sup>1</sup>

NR-55407 exhibits potent neutralizing activity against pseudoviruses bearing SARS-CoV-2 S protein from wild type (WT) and Variants of Concern (VOCs), including Alpha (B.1.1.7), Beta (B.1.351), Gamma (P.1), Delta (B.1.617.2) and Omicron (B.1.1.529).<sup>1</sup>

**Material Provided:**

Each vial contains 100 µg of lyophilized powder prepared from bulk protein in a 0.2 µm filtered solution of phosphate buffered saline (PBS; pH 7.4) with 10% trehalose as protectant.

**Packaging/Storage:**

NR-55407 was packaged aseptically in glass vials. The product is provided lyophilized and should be placed in a closed, dry environment with desiccants and stored at -20°C or colder immediately upon arrival. A frost-free freezer should be avoided, since changes in moisture and temperature may affect protein stability.

**Functional Activity:**

NR-55407 is specific against SARS-CoV-2 S protein RBD domain. No cross-reactivity was detected with S protein RBD domain of other coronaviruses, including SARS-CoV, MERS-CoV, HCoV-229E, HCoVNL63, HCoV-OC43 and HCoV-HKU1.<sup>1</sup> Biological activity of NR-55407 was measured via ELISA (Figures 2 and 3) and Surface Plasma Resonance (SPR) assays (Figure 4). NR-55407 can be paired with other Anti-SARS-CoV-2 Spike S1 antibodies to detect SARS-CoV-2 Spike S1 protein in sandwich ELISA or lateral flow assay.<sup>1</sup>

**Reconstitution:**

NR-55407 should be reconstituted with 100 µL sterile deionized water to a stock solution of 1 mg/mL. It should be solubilized for 30 to 60 minutes at room temperature with occasional gentle mixing. Carrier protein [e.g., 0.1% (w/v) bovine serum albumin] must be included in the reconstitution buffer if the final protein concentration is lower than recommended or NR-55407 is aliquoted to less than 10 µg/vial. Note: Avoid vigorous shaking or vortexing.

**Storage of Reconstituted Antibody:**

Reconstituted NR-55407 should be stored at -70°C or colder immediately and used within 3 months. Avoid repeated freeze-thaw cycles.

**Citation:**

Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: Monoclonal Anti-SARS-Related Coronavirus 2 Spike Glycoprotein Receptor Binding Domain (RBD), Chimeric Antibody Human IgG1, Clone AM122 (produced *in vitro*), NR-55407.”

**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 (BMBL). Current Edition. Washington, DC: U.S. Government Printing Office.

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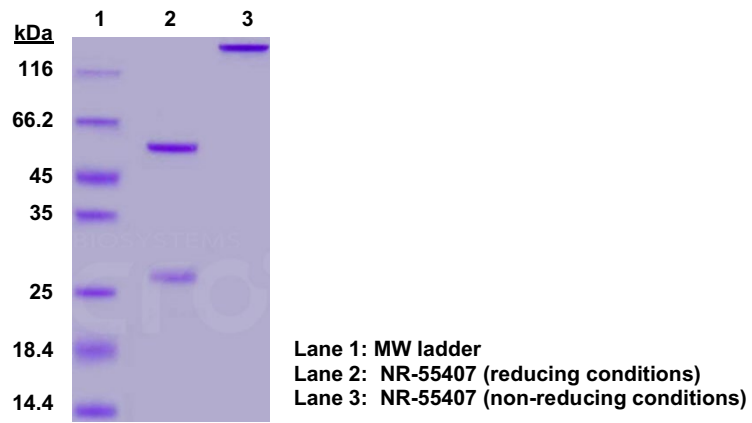
**References:**

1. Chen, J., Personal Communication.

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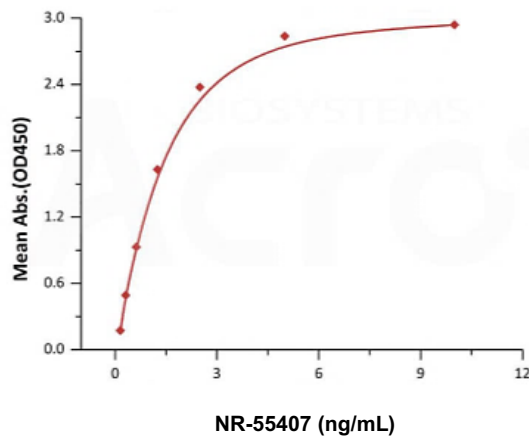


**Figure 1: Representative SDS-PAGE**



**Figure 2: Representative ELISA**

2A



2B

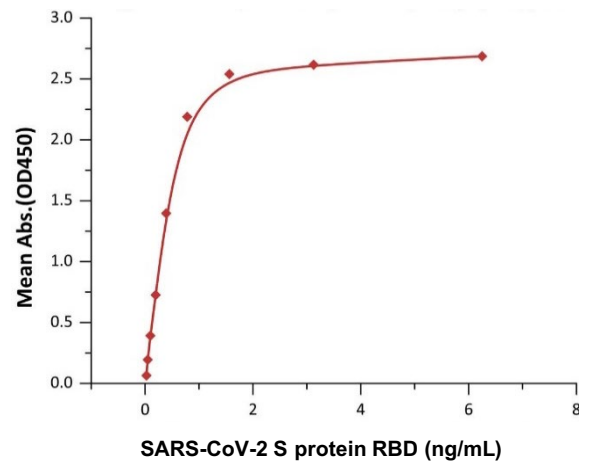


Figure 3: Inhibition of SARS-CoV-2 RBD:ACE2 Interaction

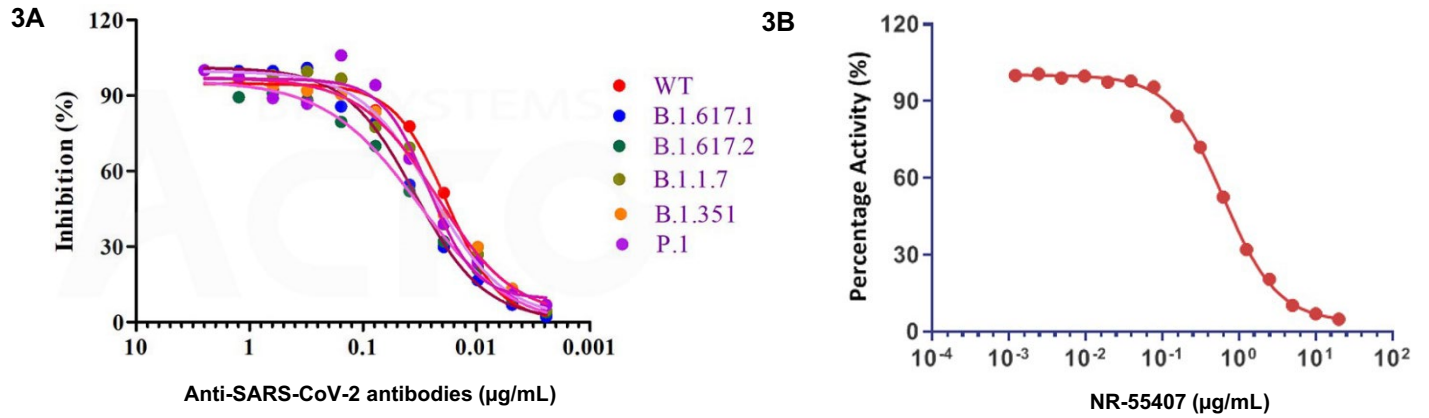


Figure 4: Representative SPR

