

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

Catalog No. NR-55408

ACROBiosystems Catalog No. S1N-M130

For research use only. Not for use in humans.

Contributor and Manufacturer:

ACROBiosystems, Newark, Delaware, USA

Product Description:

Antibody Class: IgG1k

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 using recombinant antibody technology. The variable region was obtained from mice immunized with purified recombinant SARS-CoV-2 spike S1 protein, which was combined with constant domains of the human IgG1 molecule.¹ Representative SDS-PAGE results are shown in Figure 1.¹

Material Provided:

Each vial contains 100 µg of lyophilized powder prepared from bulk protein in a 0.2 µm filtered solution of PBS, pH7.4 with 10% trehalose as protectant.

Packaging/Storage:

NR-55408 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-55408 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-HKU1.¹ Biological activity of NR-55408 was measured via ELISA (Figures 2 and 3) and biolayer interferometry (BLI) assays (Table 1). NR-55408 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.¹

Reconstitution:

NR-55408 should be reconstituted with 100 µL sterile deionized water to a stock solution of 1000 µg/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-55408 is aliquoted to less than 10 µg per vial. Note: Avoid vigorous shaking or vortexing.

Storage of Reconstituted Antibody:

Reconstituted NR-55408 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 (produced *in vitro*), NR-55408.”

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 \(BMBL\)](#), 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

Disclaimers:

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References:

1. Chen, J., Personal Communication.

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Figure 1: Representative SDS-PAGE

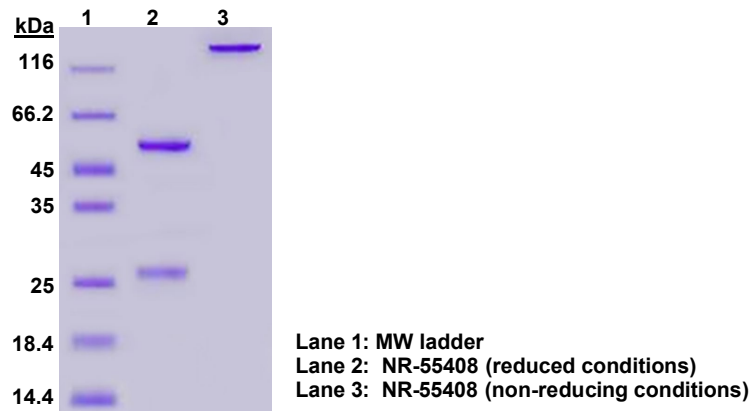


Figure 2: Representative ELISA

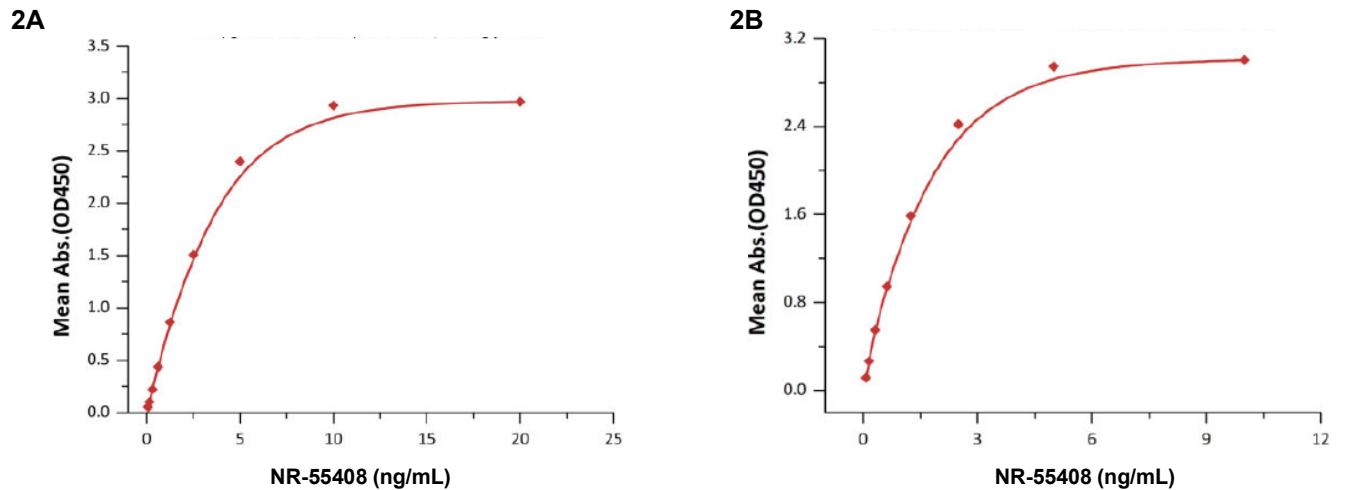


Figure 3: Representative ELISA

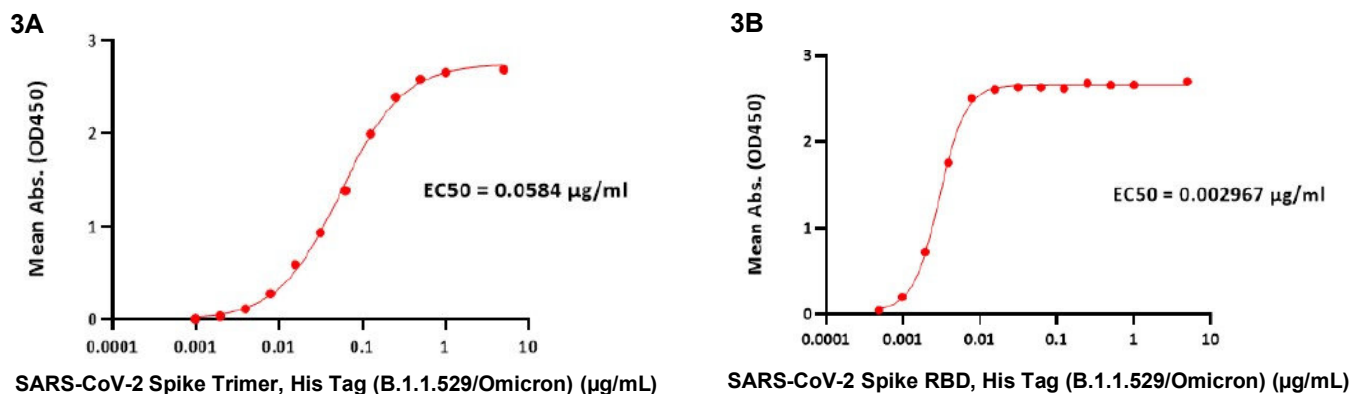


Table 1: SARS-CoV-2 Spike RBD Binding Affinity

Antigen, His Tag	Affinity Constant (nM)	ACROBiosystems Cat. No.
RBD	0.603	SPD-C52H3
RBD (N501Y)	1.38	SPD-C52Hn
RBD (K417N, E484K, N501Y)	1.10	SPD-C52Hp
RBD (K417T, E484K, N501Y),	1.07	SPD-C52Hr
RBD (L452R, T478K)	1.03	SPD-C52Hh
RBD (BA.2/Omicron)	1.04	SPD-C522g