Product Information Sheet for NR-53789

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

Catalog No. NR-53789
Sino Biological Catalog No. 40150-D001

For research use only. Not for use in humans.

Contributor and Manufacturer:
Sino Biological, Wayne, Pennsylvania, USA

Product Description:
Antibody Class: IgG1κ
Clone: D001
Chimeric monoclonal antibody prepared against the severe acute respiratory syndrome coronavirus (SARS-CoV) 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 spike RBD protein (Sino Biological 40150-V08B2) to produce the variable region, which was combined with constant domains of the human IgG1 molecule.[1]

Material Provided:
Each vial of NR-53789 contains approximately 50 µL of purified monoclonal antibody in phosphate buffered saline (PBS). The concentration, expressed as mg per mL, is shown on the Certificate of Analysis.

Packaging/Storage:
NR-53789 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-53789 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-53789 is specific to the SARS-CoV spike RBD protein and shows cross reactivity in ELISA with the SARS-CoV spike S1 protein, the SARS-CoV-2 spike RBD protein and the SARS-CoV-2 spike S1 protein, with no cross reactivity with the spike S1 proteins from MERS-CoV, HCoV-HKU1 (isolates N1 and N5), HCoV-NL63 or HCoV-229E, or the HCoV-OC43 spike S1 + S2 ectodomain (ECD) protein. The biological activity of NR-53789 was measured by its binding ability using biosensor analysis (Figure 1), in which immobilized recombinant SARS-CoV-2 spike RBD protein (His tag) (Sino Biological 40592-V08B-B) can bind NR-53789; the affinity constant is 0.12 nM.[1]

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Monoclonal Anti-SARS Coronavirus/SARS-Related Coronavirus 2 Spike Glycoprotein Receptor Binding Domain (RBD), Chimeric Antibody (produced *in vitro*), NR-53789."

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:
You are authorized to use this product for research use only. It is not intended for human use.

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References:
1. Lu, Z., Personal Communication.
2. Shen, S., T. H. P. Tan and Y.-J. Tan. "Expression, Glysosylation, and Modification of the Spike (S) Glycoprotein of SARS CoV." Methods Mol. Biol. 379 (2007): 127-135. PubMed: 17502675.

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3. Du, L., et al. "The Spike Protein of SARS-CoV – A Target for Vaccine and Therapeutic Development." Nat. Rev. Microbiol. 7 (2009): 226-236. PubMed: 19198616.
4. Xiao, S. and D. S. Dimitrov. "The SARS-CoV S Glycoprotein." Cell. Mol. Life Sci. 61 (2004): 2428-2430. PubMed: 15526150.

Support Provided by NIAID

Figure 1: Representative Biosensor Analysis