Product Information Sheet for NR-20813

Monoclonal Anti-Botulinum Neurotoxin Type B, Clone BM.2G6.7A (produced *in vitro*)

Catalog No. NR-20813

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

For research use only. Not for human use.

Contributor:

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Manufacturer:

BEI Resources

Product Description:

Antibody Class: IgG1κ

Mouse monoclonal antibody prepared against the type B neurotoxin of *Clostridium botulinum* (*C. botulinum*) was purified from clone BM.2G6.7A hybridoma supernatant by protein G affinity chromatography. The B cell hybridoma was generated by the fusion of NSO mouse myeloma cells with splenocytes from mice immunized by intraperitoneal and intravenous injection with *C. botulinum* neurotoxin type B (BoNT/B) toxin and toxoid.[1]

C. botulinum are anaerobic Gram positive spore-forming bacteria which produce neurotoxins categorized serologically into seven types, A through G.[2] Four of the seven serotypes cause human botulism with the vast majority of cases due to serotypes A and B.[3] BoNT/B is a zinc-binding metalloprotease (holotoxin) that is endogenously cleaved into a heavy (~ 100 kDa) and a light (~ 50 kDa) chain that are held together by a reducible disulfide bond.[4]

Material Provided:

Each vial of NR-20813 contains approximately 100 µL of purified monoclonal antibody in PBS. The concentration, expressed as mg per mL, is shown on the Certificate of Analysis.

Packaging/Storage:

NR-20813 was packaged aseptically in screw-capped plastic vials and is provided frozen on dry ice. The product should be stored at -20°C or colder immediately upon arrival. Freeze-thaw cycles should be avoided.

Functional Activity:

NR-20813 reacts with the heavy chain of botulinum neurotoxin type B in western blot assays. The antibody is also reported to be useful for ELISA, RIA, flow cytometry, immunocytochemistry, immunohistochemistry, and immunoprecipitation.[1]

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Monoclonal Anti-Botulinum Neurotoxin Type B, Clone BM.2G6.7A (produced *in vitro*), NR-20813."

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. 5th ed. Washington, DC: U.S. Government Printing Office, 2007; see www.cdc.gov/od/ohs/biosfty/bmbl5/bmbl5toc.htm.

Disclaimers:

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References:

1. Mukherjee, J. M., personal communication.
2. Lindström, M. and H. Korkeala. "Laboratory Diagnostics of Botulism." Clin. Microbiol. Rev. 19 (2006): 298-314. PubMed: 16614251.

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3. Centers for Disease Control and Prevention. "Botulism in the United States, 1899-1996. Handbook for Epidemiologists, Clinicians, and Laboratory Workers." Atlanta, Georgia (1998). Downloadable at http://www.bt.cdc.gov/agent/botulism/index.asp.
4. Sathyamoorthy, V. and B. R. DasGupta. "Separation, Purification, Partial Characterization and Comparison of the Heavy and Light Chains of Botulinum Neurotoxin Types A, B, and E." J. Biol. Chem. 260 (1985): 10461-10466. PubMed: 4030755.

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