

***Clostridium botulinum*, Strain 2217
(Type B, Non-Proteolytic)**

Catalog No. NR-240
(Derived from ATCC® 17844™)

For research only. Not for human use.

Contributor:
ATCC®

Manufacturer:
BEI Resources

Product Description:

Bacteria Classification: *Clostridiaceae, Clostridium*

Species: *Clostridium botulinum*

Strain: 2217 (also referred to as McClung 2217)

Neurotoxin Type:¹⁻³ B (non-proteolytic)

Original Source: *Clostridium botulinum* (*C. botulinum*), strain 2217 was deposited to the ATCC® by Leland S. McClung.

C. botulinum is a Gram-positive spore-forming anaerobe found in soil, dust and marine sediments throughout the world.² Most clostridia will not grow under aerobic conditions and vegetative cells are killed by exposure to oxygen. Their spores, however, are able to survive long periods of exposure to air. In their active form, these bacteria secrete powerful neurotoxins that result in the paralytic illness botulism.²

Botulism toxin (BoNT) types are distinguished by the inability of polyclonal antibodies that neutralize one toxin type to neutralize any of the other toxin types. There are currently eight types of BoNTs designated by the letters A through H and some of these are further distinguished as proteolytic and non-proteolytic.³

Material Provided:

Each vial contains approximately 0.7 mL of bacterial culture in Modified Reinforced Clostridial broth supplemented with 10% glycerol.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:

NR-240 was packaged aseptically, in screw-capped plastic cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

Growth Conditions:

Media:

Modified Reinforced Clostridial broth or Reinforced Clostridial broth or equivalent

Modified Reinforced Clostridial agar or Reinforced Clostridial agar or Tryptic Soy agar with 5% defibrinated sheep blood or equivalent

Incubation:

Temperature: 37°C

Atmosphere: Anaerobic

Propagation:

1. Keep vial frozen until ready for use, then thaw.
2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tube, slant and/or plate at 37°C for 2 to 3 days.

Citation:

Acknowledgment for publications should read “The following reagent was obtained through BEI Resources, NIAID, NIH: *Clostridium botulinum*, Strain 2217 (Type B, Non-Proteolytic), NR-240.”

Biosafety Level: 2

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, 2009; 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.

Use of this product is subject to the terms and conditions of the BEI Resources Material Transfer Agreement (MTA). The MTA is available on our Web site at www.beiresources.org.

While BEI Resources uses reasonable efforts to include accurate and up-to-date information on this product sheet, neither ATCC® nor the U.S. Government makes any warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. Neither ATCC® nor the U.S. Government warrants that such information has been confirmed to be accurate.

This product is sent with the condition that you are responsible for its safe storage, handling, use and disposal. ATCC® and the U.S. Government are not liable for any damages or injuries arising from receipt and/or use of this product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, the U.S. Government, ATCC®, their suppliers and contributors to BEI Resources are not liable for damages arising from the misidentification or misrepresentation of products.

Use Restrictions:

This material is distributed for internal research, non-commercial purposes only. This material, its product or its derivatives may not be distributed to third parties. Except as performed under a U.S. Government contract, individuals contemplating commercial use of the material, its products or its derivatives must contact the contributor to determine if a license is required. U.S. Government contractors may need a license before first commercial sale.

References:

1. Lindström, M. K., et al. "Identification of *Clostridium botulinum* with API 20 A, Rapid ID 32 A and RapID ANA II." FEMS Immunol. Med. Microbiol. 24 (1999): 267-274. PubMed: 10397310.
2. Hill, K. K., et al. "Genetic Diversity among Botulinum Neurotoxin-Producing Clostridial Strains." J. Bacteriol. 189 (2007): 818-832. PubMed: 17114256.
3. Stringer, S. C., et al. "Genomic and Physiological Variability within Group II (non-proteolytic) *Clostridium botulinum*." BMC Genomics 14 (2013): 333. PubMed: 23679073.

ATCC® is a trademark of the American Type Culture Collection.

