

Monoclonal Anti-Epsilon Toxin from *Clostridium perfringens*, Clone 5B5H12 (produced *in vitro*)

Catalog No. NR-45116

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Contributor:

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Manufacturer:

BEI Resources

Product Description:

Antibody Class: IgG1k

Mouse monoclonal antibody prepared against the epsilon toxin from *Clostridium perfringens* (*C. perfringens*) was purified from clone 5B5H12 hybridoma supernatant by protein G affinity chromatography. The monoclonal antibody was raised against a synthetic peptide corresponding to the carboxy-terminal region of epsilon protoxin (GenPept: AAA23236). The peptide was conjugated to keyhole limpet hemocyanin (KLH).¹

C. perfringens are common soil-dwelling bacteria that can infect humans and domestic livestock. These bacteria are classified into types A to E based on the toxins produced during the growth of these organisms. Epsilon toxin is produced by types B and D and is thought to form pores in target cell membranes resulting in edema in various organs and the central nervous system.²⁻⁵

Material Provided:

Each vial of NR-45116 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-45116 was packaged aseptically in screw-capped plastic cryovials and is provided frozen on dry ice. The item should be stored at -20°C or colder immediately upon arrival. Freeze-thaw cycles should be avoided.

Functional Activity:

NR-45116 is being released without confirmation of functional activity. The monoclonal antibody produced by hybridoma clone 5B5H12 has been reported to react with recombinant *C. perfringens* epsilon toxin by ELISA.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Monoclonal Anti-Epsilon Toxin from *Clostridium perfringens*, Clone 5B5H12 (produced *in vitro*), NR-45116."

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, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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References:

1. O'Brien, A.D. and J.F. Sinclair, Personal Communication.
2. Smedley, J. G. 3rd, et al. "The Enteric Toxins of

- Clostridium perfringens*." Rev. Physiol. Biochem. Pharmacol. 152 (2004): 183-204. PubMed: 15517462.
3. Goswami, P. P., et al. "Molecular Cloning of *Clostridium perfringens* Epsilon-Toxin Gene and Its High Level Expression in *E. coli*." Biochem. Biophys. Res. Commun. 226 (1996): 735-740. PubMed: 8831683.
 4. Havard, H. L., S. E. C. Hunter, and R. W. Titball. "Comparison of the Nucleotide Sequence and Development of a PCR Test for the Epsilon Toxin Gene of *Clostridium perfringens* Type B and Type D." FEMS Microbiol. Lett. 97 (1992): 77-82. PubMed: 1427007.
 5. Petit, L., M. Gibert, and M. R. Popoff. "*Clostridium perfringens*: Toxinotype and Genotype." Trends Microbiol. 7 (1999): 104-110. PubMed: 10203838.

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