

**Polyclonal Anti-Epsilon Toxin from *Clostridium perfringens* (immunoglobulin G, Rabbit)**

**Catalog No. NR-865**

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**For research use only. Not for human use.**

**Contributor and Manufacturer:**

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**Product Description:**

Polyclonal immunoglobulin G antibody specific to the epsilon toxin from *Clostridium perfringens* (*C. perfringens*)<sup>1,2</sup> was produced by immunization of rabbits with peptides that correspond to distinct internal regions of the full-length epsilon toxin.<sup>3</sup> The peptides were conjugated to keyhole limpet hemocyanin (KLH) using a cysteine added to the carboxyl-terminal end (underlined below) and were composed of the following amino acid sequences:

98 NPKVELDGEPSMNYLEDC  
298 EYVIPVDKKEKSNDSNIC

The polyclonal immunoglobulin G antibody was purified by caprylic acid precipitation or protein G affinity chromatography.<sup>4</sup> See Certificate of Analysis for details.

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

**Material Provided:**

Each vial contains approximately 0.1 mg of NR-865 in phosphate-buffered saline.

**Packaging/Storage:**

NR-865 was filter sterilized and packaged aseptically in cryovials. The product is provided frozen on dry ice and should be stored at -20°C or colder immediately upon arrival. Freeze-thaw cycles should be avoided.

**Functional Activity:**

NR-865 is specific to the epsilon toxin from *C. perfringens* as

determined by Western blot analysis. Applications: Western blot, ELISA.

**Citation:**

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Polyclonal Anti-Epsilon Toxin from *Clostridium perfringens* (immunoglobulin G, Rabbit), NR-865."

**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/bmb15/index.htm](http://www.cdc.gov/biosafety/publications/bmb15/index.htm).

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**References:**

1. Smedley, J. G. 3rd, et al. "The Enteric Toxins of *Clostridium perfringens*." Rev. Physiol. Biochem. Pharmacol. 152 (2004): 183–204. PubMed: 15517462.
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3. 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. GenPept: AAA23236.
4. Russo, C., L. Callegaro, E. Lanza, and S. Ferrone. "Re.: Purification of IgG Monoclonal Antibody by Caprylic Acid Precipitation." J. Immunol. Methods 65 (1983): 269–271. PubMed: 6655243.
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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