Polyclonal Anti-Shiga Toxin Type 1 Subunit A (IgG, Rabbit)

Catalog No. NR-4678

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For research use only. Not for human use.

Contributor and Manufacturer:

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Product Description:

Antibody Class: IgG
Polyclonal antibodies to the A subunit of Shiga toxin type 1 (Stx1) were produced in rabbit and purified by protein G affinity chromatography.

Shiga toxins are multimeric molecules that are comprised of two polypeptide subunits, A and B. The Stx B subunit is a pentamer that binds the toxin to glycolipids on host cell membranes allowing the entire Stx molecule to enter the cell via endocytosis.[1] Once inside the cell, the A subunit undergoes proteolytic cleavage and the reduction of an internal disulfide bond to generate Stx A_1 and Stx A_2.[2] Stx A_1 is an N-glycosidase that catalytically inactivates the 28s ribosomal RNA subunit to inhibit protein synthesis.[2]

Material Provided:

Each vial of NR-4678 contains approximately 1 mL of purified polyclonal antibody in PBS. The concentration, expressed as mg per mL, is shown on the Certificate of Analysis.

Packaging/Storage:

NR-4678 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-4678 is specific to the A subunit of Shiga toxin 1 by standard western blot analysis and ELISA.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: Polyclonal Anti-Shiga Toxin Type 1 Subunit A (IgG, Rabbit), NR-4678."

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.

Disclaimers:

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References:

1. Skinner, L. M. and M. P. Jackson. "Investigation of Ribosome Binding by the Shiga Toxin A1 Subunit, Using Competition and Site-Directed Mutagenesis." J. Bacteriol. 179 (1997): 1368-1374. PubMed: 9023224.
2. Sandvig, K. "Shiga Toxins." Toxicon 39 (2001): 1629-1635. PubMed: 11595626.

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