

Polyclonal Anti-Ricin Toxin (immune globulin G, Rabbit)

Catalog No. NR-862

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

For research use only. Not for human use.

Contributor and Manufacturer:

Alison D. O'Brien, Ph.D., Chairperson, and James F. Sinclair, Ph.D., Laboratory Supervisor, Department of Microbiology and Immunology, Uniformed Services University of the Health Sciences, Bethesda, Maryland, USA

Product Description:

Polyclonal immune globulin G antibody specific to ricin^{1,2} toxin was produced by immunization of rabbits with reduced and alkylated ricin holotoxin that was extracted and purified from the seeds of the castor bean plant *Ricinus communis*. The polyclonal immune globulin G antibody was purified from serum by caprylic acid precipitation.³

Ricin toxin is one of the most toxic and easily produced plant toxins. Ricin toxin consists of two polypeptide chains, A and B, linked by a disulfide bond. The A chain catalytically inactivates the eukaryotic 28S ribosomal RNA subunit, resulting in the inhibition of protein synthesis and death of the cell. The B chain is responsible for receptor binding and delivery of the toxin to the target cell.

Material Provided:

Each vial contains approximately 0.1 mg of NR-862 in phosphate-buffered saline.

Packaging/Storage:

NR-862 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. Once thawed, the unused material may be stored at 4°C. Freeze-thaw cycles should be avoided.

Functional Activity:

NR-862 is specific to ricin toxin as determined by Western blot analysis. The polyclonal immune globulin antibody can bind both denatured and native ricin toxin, and can be labeled or radiolabeled without losing specificity.

Applications: ELISA, Western blot.

Citation:

Acknowledgment for publications should read "The following reagent was obtained through the NIH Biodefense and Emerging Infections Research Resources Repository, NIAID, NIH: Polyclonal Anti-Ricin Toxin (immune globulin G, Rabbit), NR-862."

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.

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. Doan, L. G. "Ricin: Mechanism of Toxicity, Clinical Manifestations, and Vaccine Development. A Review." J. Toxicol. Clin. Toxicol. 42 (2004): 201–208. PubMed: 15214627.
2. Halling, K. C., et al. "Genomic Cloning and Characterization of a Ricin Gene from *Ricinus communis*." Nucleic Acids Res. 13 (1985): 8019–8033. PubMed: 2999712. GenBank: X03179.
3. 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.

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

