Product Information Sheet for NR-843

Monoclonal Anti-Ricin Toxin A Chain (produced in vitro)

Catalog No. NR-843
This reagent is the tangible property of the U.S. Government.

For research use only. Not for human use.

Contributor and Manufacturer:
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Product Description:
Antibody Class: IgG1
Mouse monoclonal antibody to the A chain of the ricin holotoxin from Ricinus communis (R. communis) was purified using protein A affinity chromatography from supernatants obtained from the mouse hybridoma clonal cell line TFTA1 (ATCC® CRL-1771™). TFTA1 was generated by the fusion of SP2/5 myeloma cells with immunized mouse splenocytes.

Ricin is a cytotoxic protein isolated from the beans of the castor plant, Ricinus communis. The ricin holotoxin 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. The ricin A chain that is expressed in R. communis is post-translationally glycosylated as two distinct isoforms that have been designated A1 and A2. When separated by SDS-PAGE, these two glycoforms appear as two distinct bands with masses of approximately 31 kDa and 32 kDa. The sequence of the R. communis gene for the ricin toxin precursor protein has been reported (GenBank: X03179).

Material Provided:
Each vial contains approximately 50 µg of NR-843. Sodium azide (0.05%) was added to the preparation of purified monoclonal antibody as a preservative. The concentration, expressed as mg per mL, is shown on the Certificate of Analysis.

Packaging/Storage:
NR-843 was 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:
Monoclonal antibody produced from ATCC® CRL-1771™ is specific to the A chain of ricin toxin and does not cross react with the B chain. NR-843 has been shown to be specific for ricin holotoxin using Western blot analysis and ELISA. NR-843 can bind both native and denatured protein. 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: Monoclonal Anti-Ricin Toxin A Chain (produced in vitro), NR-843.”

Biosafety Level: 1

Disclaimers:
You are authorized to use this product for research use only. It is not intended for human use.

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References:

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