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Product #179A
Date of Manufacture: 3/2014
Last Retest Date: 1/2017
Recommended Retest Date: 7/2021

CERTIFICATE OF ANALYSIS PERTUSSIS TOXIN (IN GLYCEROL) Lot #179227A1A

Contents

Each vial contains 50 µg of Pertussis Toxin in 50% glycerol, 0.05 M Tris, 0.01 M glycine, 0.5 M NaCl, pH 7.5, at a concentration of 0.2 mg/ml. Mix gently prior to use to ensure a uniform suspension. **Do not sterile filter, as this will result in loss of material. Handle the product gently; do not vortex.**

Concentration

A modification of the method of Bradford,¹ using NIST traceable bovine serum albumin as the standard, is used to determine the protein concentration.

Purity

This preparation migrates as five distinct bands, as described by Tamura et al.,² when run on 12% SDS-PAGE. Densitometric analysis estimates the purity as >95%.

This product has been tested for endotoxin levels and was found to be acceptable.

In immunoblot assays, this product does not react with antibodies to FHA, Pertactin, Fimbriae 2 or Fimbriae 3.

Assays

CHO Cell Assay: When examined in a CHO cell assay as described by Hewlett et al.,³ the lowest concentration of toxin at which a positive response (clustered growth pattern) was obtained was 0.003 ng/ml. NOTE: Toxicity may vary by lot of toxin. Each laboratory should determine the optimum dosage for each lot in a particular application.

Adenylate Cyclase Assay: the Adenylate Cyclase activity of this lot, in the presence of 1 µmolar calmodulin, is 15 picomole cAMP/min/µg toxin, when assayed by the method of Wolff et al.⁴

Packaging/Storage

This product is provided as an aseptically packaged liquid. Store at -20°C.

Activation

Please note that this product is not activated. If your system requires activation, see Kaslow et al.⁵ for suggested conditions.

(continued)

Handling

Good laboratory technique should be employed in the safe handling of this product. Wear appropriate laboratory attire including lab coat, gloves and safety glasses. Nitrile gloves are recommended when handling lyophilized material.

This product is intended for research purposes by qualified personnel. It is not intended for use in humans or as a diagnostic agent. List Biological Laboratories, Inc. is not liable for any damages resulting from the misuse or handling of this product.

FOR RESEARCH PURPOSES ONLY. NOT FOR HUMAN USE.

References

1. Bradford, M.M. (1976) *Anal. Biochem.* **72**, 248 – 254.
2. Tamura, M., Nogomori, K., Murai, S., Yajima, M., Ito, K., Katada, T., Ui, M. and Ishi, S. (1982) *Biochem.* **21**, 5516 – 5522.
3. Hewlett, E.L., Sauer, K.T., Myers, G.A., Cowell, J.L. and Guerrant, R.L. (1983) *Infect. Immun.* **40**, 1198 – 1203.
4. Wolff, J., Cook, G.H., Goldhammer, A.R. and Berkowitz, S.A. (1980) *PNAS* **77**, 3841 – 3844.
5. Kaslow, H.R., Lim, L.K., Moss, J. and Lesikar, D.D. (1987) *Biochem.* **26**, 123 – 127.

Production: FD Date: 10/26/18 Management: [Signature] Date: 10/25/18 QA/QC: JC Date: 10/25/18