



**CERTIFICATE OF ANALYSIS  
PERTUSSIS TOXIN (IN GLYCEROL)  
Lot #179216A2A**

**Contents**

Each vial of Pertussis Toxin contains 50 µg of protein 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,<sup>1</sup> using 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.,<sup>2</sup> when run on 12% SDS-polyacrylamide gels.

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.,<sup>3</sup> the lowest concentration of toxin at which a positive response (clustered growth pattern) was obtained was 0.01 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 1 picomole cAMP/min/µg toxin, when assayed by the method of Wolff et al.<sup>4</sup>

**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.<sup>5</sup> for suggested conditions.

(continued)

**Handling**

Good laboratory technique should be employed in the safe handling of this product. Wear appropriate laboratory attire including a lab coat, gloves and safety glasses.

This product is intended for research purposes by qualified personnel only. 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.

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