

CERTIFICATE OF ANALYSIS  
PERTUSSIS TOXIN  
(ISLET-ACTIVATING PROTEIN)  
Lot #179216A1AContents:

Each vial contains 50.0 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. The suspension should be made uniform by gentle mixing prior to use. Do not sterile filter, as this will result in loss of material. For long term storage, dilute in a higher ionic strength buffer, such as sterile 0.1 M sodium phosphate, pH 7.0, 0.5 M NaCl. **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.

Electrophoretic Purity:

This preparation migrates as five distinct bands, as described by Tamura *et al.*,<sup>2</sup> when run on 4-12% SDS-polyacrylamide gels prepared according to the method of Wyckoff<sup>3</sup>, a modification of the Laemmli<sup>4</sup> gel system.

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

Assays:

CHO Cell Assay: When examined in a CHO cell assay as described by Hewlett *et al.*,<sup>5</sup> the lowest concentration of toxin at which a positive response (clustered growth pattern) was obtained was 0.01 ng/ml.

Adenylate Cyclase Assay: The adenylate cyclase activity of this lot is 0.73 picomole/min/µg in the presence of 1 µmolar calmodulin when assayed by the method of Wolff *et al.*<sup>6</sup>

Packaging/Storage:

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

(continued)

Activation:

Please note that this product is not activated. If your system requires activation, see Kaslow *et al.*<sup>7</sup> for suggested conditions.

Handling:

Good laboratory technique should be employed in the safe handling of this product. This requires observing the following practices:

1. **Wear appropriate laboratory attire including a lab coat, gloves and safety glasses.**
2. **Do not mouth pipette, inhale, ingest or allow to come into contact with open wounds. Wash thoroughly any area of the body which comes into contact with the product.**
3. **Avoid accidental autoinoculation by exercising extreme care when handling in conjunction with any injection device.**
4. **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. Wyckoff, M., Rodbard, D. And Chramback, A. (1977) *Anal. Biochem.* **78**, 459-482.
4. Laemmli, U.K. (1970) *Nature* **227**, 680-685.
5. Hewlett, E.L., Sauer, K.T., Myers, G.A., Cowell, J.L. and Guerrant, R.L. (1983) *Infect. Immun.* **40**, 1198-1203.
6. Wolff, J., Cook, G.H., Goldhammer, A.R. and Berkowitz, S.A. (1980) *PNAS* **77**, 3841-3844.
7. Kaslow, H.R., Lim, L.-K., Moss, J. and Lesikar, D.D. (1987) *Biochem.* **26**, 123-127.

Production: SH Date: 2-22-10 Management: MT Date: 3/3/10 QA/QC: CL Date: 3/3/10