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CERTIFICATE OF ANALYSIS
PERTUSSIS TOXIN
(ISLET-ACTIVATING PROTEIN)
Lot #179202A1A

Contents:

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, reconstitute 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,¹ 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.*,² when run on polyacrylamide SDS-urea gels prepared according to a modification of the method of Laemmli.³

Assays:

CHO Cell Assay: When examined in a CHO cell assay as described by Hewlett *et al.*,⁴ the lowest concentration of toxin at which a positive response (clustered growth pattern) was obtained was 0.33 ng/ml.

Adenylate Cyclase Assay: The adenylate cyclase activity of this lot is 4.5 picomole/min/µg in the presence of 1 µmolar calmodulin when assayed by the method of Wolff *et al.*⁵

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.*⁶ 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. Laemmli, U.K. (1970) *Nature* **227**, 680-685.
4. Hewlett, E.L., Sauer, K.T., Myers, G.A., Cowell, J.L. and Guerrant, R.L. (1983) *Infect. Immun.* **40**, 1198-1203.
5. Wolff, J., Cook, G.H., Goldhammer, A.R. and Berkowitz, S.A. (1980) *PNAS* **77**, 3841-3844.
6. Kaslow, H.R., Lim, L.-K., Moss, J. and Lesikar, D.D. (1987) *Biochem.* **26**, 123-127.

Approved: KA Date: 9/30/08 Approved: [Signature] Date: 9-30-08