LIST BIOLOGICAL LABORATORIES, INC.

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Product #130B

CERTIFICATE OF ANALYSIS
BOTULINUM NEUROTOXIN TYPE A
Lot #13027A4A

Contents:

Each 100 µg vial of botulinum toxin type A, when reconstituted with 1.0 ml of appropriate buffer, contains 1.25% lactose. **To insure full recovery of toxin from the vial, include 1.0 mg/ml BSA in the reconstitution buffer.** Use sufficient volume to wash down the walls and stopper, if necessary. Handle the product gently; do not vortex. Read all handling information prior to reconstitution. When the toxin is used for *in vitro* studies, it is preincubated in a buffer containing 5mM dithiothreitol for 30 minutes in order to reduce and thereby activate the toxin. For use with SNAPtide™, Product # 520 and 521, see the corresponding Certificate of Analysis for the appropriate buffer.

Concentration:

Protein concentration was determined by absorbance at 280 nm using an extinction coefficient of 1.63[1] for a 1 mg/ml solution.

Gel Electrophoresis:

When examined on 7.5% SDS-polyacrylamide gels run according to the method of Wyckoff[2], a modification of the Laemmli[3] gel system, this protein migrates as a single major band with an apparent molecular weight of approximately 150,000 daltons. In the presence of a reducing agent, the preparation migrates as two bands with apparent molecular weights of 100,000 and 50,000 daltons.

Storage:

This product is supplied as a lyophilized powder which has been stoppered under vacuum. Store at 4°C.

Toxicity:

Botulinum toxin is the most deadly bacterial toxin known to man. The lethal dose in unvaccinated humans is estimated at 1 ng/kg.[4] Consult the MSDS for further information.

(continued)

Handling:

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

1. **Persons handling this product and contaminated glassware should be vaccinated with pentavalent botulinum toxoid available from the Centers for Disease Control (Atlanta, Georgia, USA).**

2. **This product is to be used by skilled personnel under the direction of a principal investigator in a biosafety level 3 containment area only.**

3. **Wear appropriate attire, i.e., labcoat, eye protection and latex gloves.**

4. **Never remove the stopper prior to reconstitution and never work with the product in the powdered form. Always reconstitute it first.**

5. **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.**

6. **Avoid accidental autoinoculation by exercising extreme care when handling in conjunction with any injection device.**

7. **This product is intended for research purposes 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 USE IN HUMANS.

References:

1. Sathyamoorthy, V. and DasGupta, B.R. (1985) *J. Biol. Chem.* **260**, 10461-10466.

2. Wyckoff, M., Rodbard, D. And Chrambach, A. (1977) *Anal. Biochem.* **78**, 459-482.

3. Laemmli, U.K. (1970) *Nature* **227**, 680-685.

4. Gill, D.M. (1982) *Microbiol. Rev.* **46**, 86-94.

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