list labs
540 Division Street, Campbell, California 95008-6906
Tel. (408) 866-6363 Fax (408) 866-6364
www.listlabs.com

Product #138B
Lot #1381A1B
Release Date: July 2010

CERTIFICATE OF ANALYSIS
BOTULINUM NEUROTOXIN TYPE B COMPLEX, NICKED
from *Clostridium botulinum*
Lot #1381A1B

Contents

Each 100 µg vial of nicked botulinum neurotoxin type B complex, when reconstituted with 500 µL of water, contains 100 µg of protein in 20 mM sodium citrate, pH 6.0 with 1.25% lactose. This product has been activated by nicking. **To ensure full recovery of toxin from the vial, include 1 mg/mL of BSA or 0.2% TWEEN 20 in the reconstitution buffer. Handle the product gently. Mix by inversion, do not vortex. READ ALL HANDLING INFORMATION PRIOR TO RECONSTITUTION.**

Concentration

Protein concentration was determined by absorbance at 280 nm using an extinction coefficient of 1.85 for a 1 mg/mL solution.

Gel Electrophoresis

When examined on 4-12% SDS-polyacrylamide gels in the presence of a reducing agent, the neurotoxin bands are present at 50 and 100 kDa, and associated complex bands are present at 17, 20, 34, 48 and 130 kDa. Under non-reduced conditions, the band corresponding to the intact toxin at 150 kDa is approximately 5% of the total, indicating 95% nicked toxin complex.

Purity

The product migrates as six major bands under non-reducing conditions when examined by SDS polyacrylamide gel electrophoresis. The purity is > 95%. The absorbance ratio (OD_{260}/OD_{280}) of this preparation is 0.5.

Toxicity

This product has been activated by nicking and has been tested for activity in a FRET based assay using VAMPtide® (Product #540). Results were as expected. Toxicity testing has not been done on this lot. Botulinum toxin is the most deadly bacterial toxin known to man. The minimum lethal dose (LD_{100}) for *Clostridium botulinum* type B neurotoxin in mice is estimated at 0.5 ng/kg, i.p. Humans are said to be at least as sensitive as mice.[1] Consult the SDS for further information.

Storage

This product is supplied as a lyophilized powder which has been stoppered under vacuum. Store at 2-8°C.

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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 consult the current version of the Biosafety in Microbiological and Biomedical Laboratories.[2]

2. This product is to be used by skilled personnel under the direction of a principal investigator in an appropriate laboratory.

3. Wear appropriate attire, i.e., lab coat, eye protection, and gloves. Nitrile gloves are recommended when handling the lyophilized toxin.

4. Because this product is stoppered under vacuum, remove the stopper very slowly in a biological safety cabinet prior to reconstitution. 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. Gill, D.M. (1982) *Microbiol. Rev.* **46,** 86-94.

2. Biosafety in Microbiological and Biomedical Laboratories. U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institutes of Health.

Quality Assurance: _____ Date: 11 NOV 2021