



**CERTIFICATE OF ANALYSIS**  
**ANTI-BOTULINUM NEUROTOXIN TYPE A MONOCLONAL ANTIBODY, F1-40**  
**Lot #7311A2**

**Contents**

Each vial of antibody contains 0.1 mg of protein in PBS, pH 7.4 with 0.05% azide at a concentration of 1 mg/ml. The F1-40 antibody is a mouse derived, IgG1 monoclonal. The epitope has been mapped to the light chain of Botulinum Neurotoxin Type A (BoNT/A LC).<sup>1-3</sup>

**Concentration**

Protein concentration was determined by absorbance at 280 nm using Abs (0.1 %) = 1.4.

**Applications**

**Dot Blot:** A 1.25 µg/ml solution of the antibody was an effective probe for 0.05 µg of BoNT/A, Product #130.

**Sandwich ELISA:** The F1-40 monoclonal can be used as a capture antibody when paired with the chicken Anti-Botulinum Neurotoxin, Type A, Product #730, to detect low levels of the BoNT/A (Product #130). For example, a 1 µg coating of the F1-40 monoclonal followed by exposure to BoNT/A and a 1:1,000 dilution of the chicken Anti-Botulinum Neurotoxin, Type A, Product #730, gives a midpoint at approximately 40 ng/ml. As low as 2 ng/ml of antigen is readily detected using a standard chromogenic substrate.

**Each laboratory should determine an optimum working titer for use in each particular application.**

**HPLC Detection Assay:** A sensitive assay using this monoclonal antibody to capture BoNT/A has been developed. Since this antibody does not neutralize the enzymatic activity of the toxin, the amount of BoNT/A captured is measured by monitoring the cleavage of the FRET BoNT/A substrate, SNAPtide®, Product #520. The generation of cleaved peptide is monitored using reverse phase HPLC and sensitive detection is accomplished using a fluorescence detector. This assay is described on the poster entitled "Ultra Sensitive HPLC Detection Assay for Botulinum Neurotoxin Type A", available on our website at [www.listlabs.com](http://www.listlabs.com).

**Packaging and Storage**

This product is supplied as an aseptically filled liquid. Store at 2-8°C.

**Handling**

This product is not known to be hazardous. 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 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. Scotcher, M., McGarvey, J., Johnson, E.A., and Stanker, L. (2009) Epitope characterization and variable region sequence of F1-40, a high-affinity monoclonal antibody to botulinum neurotoxin type A (Hall strain). PLoS ONE. 4:e4924.



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Lot #7311A2

2. Stanker, L.H., Merrill, P., Scotcher, M.C. and Cheng, L.W. (2008) Development and partial characterization of high-affinity monoclonal antibodies for botulinum toxin type A and their use in analysis of milk by sandwich ELISA. *J. Immunol. Methods*, **336**:1-8.
3. Cheng, L.W., Stanker, L.H., Henderson II, T.D., Lou, J. and Marks, J.D. (2009) Antibody protection against botulinum neurotoxin intoxication in mice. *Infect. Immun.* **77**:4305-4313.

Quality Assurance:



Date:

