



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).¹⁻³

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.

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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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.

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