C. botulinum BoNT-D Light Chain Biotinylated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG

Catalog Number: BAF6037

DESCRIPTION

Species Reactivity	*C. botulinum*
Specificity	Detects *C. botulinum* BoNT-D Light Chain in Western blots. In Western blots, less than 10% cross-reactivity with recombinant Light Chains of BoNT-A, -B, -C1, -E, -F, and -G is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant Clostridium BoNT-D Light Chain Thr2-Ser428 Accession # P19321
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Botulinum Neurotoxin Type D Light Chain (Catalog # 6037-ZN)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

BoNT-D LC (Botulinum neurotoxin serotype D light chain) is a 50-55 kDa member of the peptidase M27 family of molecules. It is the product of Clostridium botulinum, and inhibits acetylcholine release from neuromuscular junctions. This is accomplished by toxin internalization with subsequent cleavage of synaptobrevin, thus blocking synaptic vesicle fusion with the presynaptic membrane. Notably, BoNT-D is not toxic to human cells. BoNT/D precursor is 1276 amino acids (aa) in length. Following internalization and precursor proteolytic cleavage, it assumes a mature form that shows a disulfide-linked 442 aa light chain/enzyme N-terminus, and a 834 aa heavy chain/receptor-binding C-terminus. The 100 kDa heavy chain creates a channel within the endosome that allows for redox rupture of the disulfide bond and entry of the light chain into the cytosol. Covalent attachment of cargo molecules to the N-terminus is used to transport molecules into the cytosol. The D light chain shares less that 50% aa identity with the other botulinum serotype light chains.

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