

***C. botulinum* BoNT-D Heavy Chain Antibody**

Monoclonal Mouse IgG_{2B} Clone # 682810

Catalog Number: MAB6639

DESCRIPTION

Species Reactivity	<i>C. botulinum</i>
Specificity	Detects recombinant <i>C. botulinum</i> BoNT-D Heavy Chain in direct ELISAs and Western blots. 100% and approximately 10% cross-reactivity with recombinant <i>C. botulinum</i> BoNT-C1 Heavy Chain is observed in Western blots and direct ELISAs, respectively. In direct ELISAs, no cross-reactivity with the Heavy Chains of BoNT-A, -E, or -G or the Light Chains of BoNT-A, -B, -C1, -D, -E, -F, -G is observed.
Source	Monoclonal Mouse IgG _{2B} Clone # 682810
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant Clostridium botulinum Neurotoxin Type D Heavy Chain Asn862-Glu1276 Accession # P19321
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

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	1 µg/mL	Recombinant <i>C. botulinum</i> BoNT-D Heavy Chain

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> 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 (Botulinum neurotoxin serotype D) is produced by Clostridium botulinum and inhibits acetylcholine release from neuromuscular junctions. Notably, BoNT-D is not toxic to human cells. The 1276 amino acid (aa) BoNT-D precursor is cleaved to generate a disulfide-linked dimer of the 50-55 kDa light chain peptidase and the 100 kDa heavy chain. The heavy chain contains receptor binding and pore forming domains. The light chain translocates through this pore to the target cell cytosol where it cleaves synaptobrevin, thus blocking synaptic vesicle fusion with the presynaptic membrane. Within aa 862-1276 of the heavy chain, BoNT-D shares 31%, 33%, and 41% aa sequence identity with BoNT-A, -B, and -C1 heavy chains, respectively.