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

**Antibody**

Monoclonal Mouse IgG<sub>2B</sub> Clone # 682810

Catalog Number: MAB6639

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### DESCRIPTION

**Species Reactivity**
C. botulinum

**Specificity**
Detects recombinant C. botulinum BoNT-D Heavy Chain in direct ELISAs and Western blots. 100% and approximately 10% cross-reactivity with recombinant C. botulinum 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, -B, -C1, -D, -E, -F, -G is observed.

**Source**
Monoclonal Mouse IgG<sub>2B</sub> Clone # 682810

**Purification**
Protein A or G purified from hybridoma culture supernatant

**Immunogen**
E. coli-derived recombinant Clostridium botulinum Neurotoxin Type D Heavy Chain

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.

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### 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.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Recommended Concentration</th>
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<tbody>
<tr>
<td>Recombinant C. botulinum BoNT-D Heavy Chain</td>
<td>1 μg/mL</td>
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### 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.

- 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.

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### 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.