

## DESCRIPTION

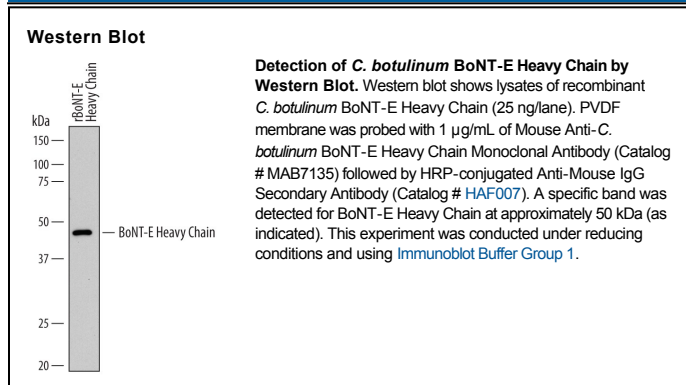
<b>Species Reactivity</b>	<i>C. botulinum</i>
<b>Specificity</b>	Detects <i>C. botulinum</i> BoNT-E Heavy Chain in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant Heavy Chains from BoNT-A or BoNT-G is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 785208
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant <i>C. botulinum</i> BoNT-E Heavy Chain Lys845-Lys1251 Accession # P30995
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied 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
<b>Western Blot</b>	1 µg/mL	See Below

## DATA



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.5 mg/mL.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Botulinum Neurotoxin Type E is one of the seven serotypes of Botulinum Neurotoxins (BoNTs) produced by various strains of *Clostridium botulinum* (1, 2). BoNTs are synthesized as inactive single chain protein precursors and activated by proteolytic cleavage to generate disulfide-linked two-chain proteins. The 50 kDa light chain contains the catalytic domain, whereas the 100 kDa heavy chain contains an internal translocation domain and a receptor binding domain (3). BoNTs are the most potent protein toxins for humans. As zinc proteases, they cleave SNARE proteins to elicit flaccid paralysis in botulism by blocking acetylcholine release at the neuromuscular junction (2-4). *E. coli*-expressed recombinant light chains are active proteases. In the absence of the heavy chains, however, they lack toxicity because they cannot enter into host cells.

### References:

1. Campbell K.D. *et al.* (1993) *J. Clin. Microbiol.* **31**:2255.
2. Montecucco, C. and Giampietro, S. (1993) *Trends. Biochem. Sci.* **18**:324.
3. Turton, K. *et al.* (2002) *Trends. Biochem. Sci.* **27**:552.
4. Schiavo, G. *et al.* (2000) *Physiol. Rev.* **80**:717.