

DESCRIPTION

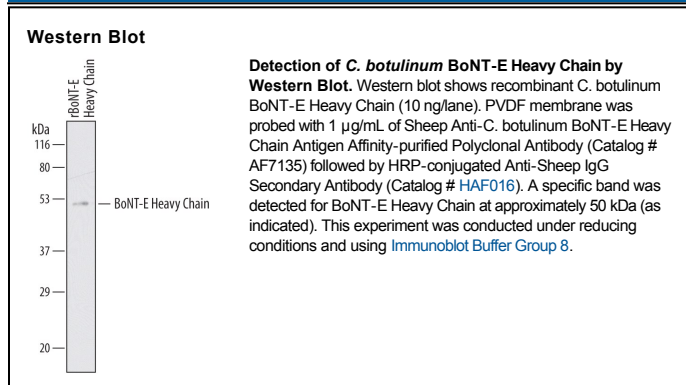
Species Reactivity	C. botulinum
Specificity	Detects C. botulinum BoNT-E Heavy Chain in direct ELISAs and Western blots. In direct ELISAs, approximately 4% cross-reactivity with BoNT-G/HCR and BoNT-A/HCR is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	E. coli-derived recombinant C. botulinum BoNT-E Heavy Chain Lys845-Lys1251 Accession # P30995
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 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	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 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/E HCR (Botulinum neurotoxin serotype E heavy chain receptor) is a 105 kDa component of BoNT/E, a member of the peptidase M27 family of molecules. BoNT/E is the product of *Clostridium botulinum*, and inhibits neurotransmitter release from neuromuscular junctions. This is accomplished by toxin internalization with subsequent cleavage of membrane-associated SNAP25, thus blocking synaptic vesicle fusion with the presynaptic membrane. The 155 kDa BoNT/E precursor is 1251 amino acids (aa) in length. Following internalization and precursor proteolytic cleavage by host proteases, it assumes a mature form that contains a 50 kDa disulfide-linked 422 aa light chain/enzyme N-terminus, and a 105 kDa, 829 aa heavy chain/receptor-binding C-terminus. The heavy chain has two components, a 327 aa translocation domain (aa 518-840), and a 408 aa cell membrane SV2:ganglioside binding region (aa 844-1250). The 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. The E heavy chain shares less than 50% aa identity with the BoNT/A heavy chain.