

DESCRIPTION

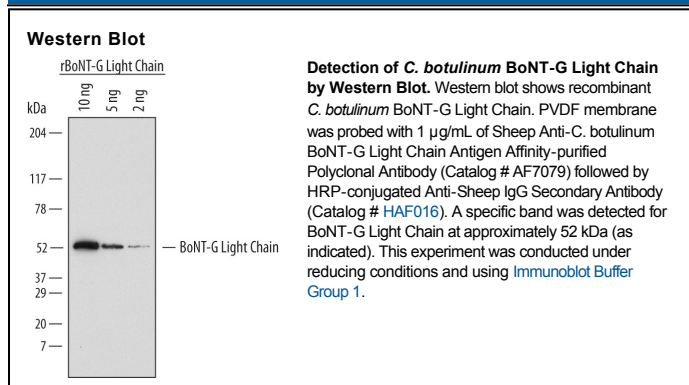
Species Reactivity	<i>C. botulinum</i>
Specificity	Detects <i>C. botulinum</i> BoNT-G Light Chain in direct ELISAs and Western blots. In direct ELISAs, less than 2% cross-reactivity with recombinant BoNT-A/LC, -B/LC, -C/LC, -D/LC, -E/LC, and BoNT-F/LC is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant <i>C. botulinum</i> BoNT-G Light Chain Pro2-His427 Accession # Q60393
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-G LC (Botulinum neurotoxin serotype G light chain) is a 47 kDa member of the peptidase M27 family of molecules. It is the product of *Clostridium botulinum*, and inhibits neurotransmitter release from the neuromuscular junction. This is accomplished by BoNT-G binding to synaptotagmin and ganglioside, followed by its internalization and subsequent light chain-mediated cleavage of synaptobrevin/VAMP that blocks synaptic vesicle fusion with the presynaptic membrane. BoNT-G precursor is 1297 amino acids (aa) in length. Following internalization and precursor proteolytic cleavage, it assumes a mature form that contains a 442 aa N-terminal enzymatic light chain disulfide-linked to an 855 aa C-terminal receptor-binding heavy chain. The 97 kDa heavy chain creates a channel within the endosome that allows for redox rupture of the disulfide bond and entry of the enzymatic light chain into the cytosol where it generates noncovalent homodimers. Over aa 2-427, BoNT-G light chain shares 60% aa identity with BoNT-B light chain.