

#### DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | C. botulinum                                                                                                                                                                                                                                                                |
| <b>Specificity</b>        | Detects C. botulinum BoNT-D Light Chain in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant Light Chains of BoNT-A, -B, -C1, -E, -F, and -G is observed.                                                               |
| <b>Source</b>             | Polyclonal Sheep IgG                                                                                                                                                                                                                                                        |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | E. coli-derived recombinant Clostridium BoNT-D Light Chain<br>Thr2-Ser428<br>Accession # P19321                                                                                                                                                                             |
| <b>Conjugate</b>          | Alexa Fluor 532<br>Excitation Wavelength: 534 nm<br>Emission Wavelength: 553 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

#### 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.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

#### PREPARATION AND STORAGE

**Shipping** The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

#### BACKGROUND

BoNT-D LC (Botulinum neurotoxin serotype D light chain) is a 50-55 kDa member of the peptidase M27 family of molecules. It is the product of Clostridium botulinum, and inhibits acetylcholine release from neuromuscular junctions. This is accomplished by toxin internalization with subsequent cleavage of synaptobrevin, thus blocking synaptic vesicle fusion with the presynaptic membrane. Notably, BoNT-D is not toxic to human cells. BoNT/D precursor is 1276 amino acids (aa) in length. Following internalization and precursor proteolytic cleavage, it assumes a mature form that shows a disulfide-linked 442 aa light chain/enzyme N-terminus, and a 834 aa heavy chain/receptor-binding C-terminus. The 100 kDa 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. Covalent attachment of cargo molecules to the N-terminus is used to transport molecules into the cytosol. The D light chain shares less than 50% aa identity with the other botulinum serotype light chains.

#### PRODUCT SPECIFIC NOTICES

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