

Active Recombinant Clostridium botulinum botA Protein

Cat. No. botA-001C Lot. No. (See product label)

SPECIFICATION

Product Overview	The recombinant BXT LC consists of amino acids (1-425) without tag was expressed in E. coli.
Species	Clostridium botulinum
Source	E.coli
ProteinLength	1-425 a.a.
Description	Botulinum toxin causes flaccid paralysis by inhibiting neurotransmitter (acetylcholine) release from the presynaptic membranes of nerve terminals of eukaryotic host skeletal and autonomic nervous system, with frequent heart or respiratory failure. Precursor of botulinum neurotoxin A2 which has 2 coreceptors; complex polysialylated gangliosides found on neural tissue and specific membrane-anchored proteins found in synaptic vesicles. Receptor proteins are exposed on host presynaptic cell membrane during neurotransmitter release, when the toxin heavy chain (HC) binds to them. Upon synaptic vesicle recycling the toxin is taken up via the endocytic pathway. When the pH of the toxin-containing endosome drops a structural rearrangement occurs so that the N-terminus of the HC forms pores that allows the light chain (LC) to translocate into the cytosol. Once in the cytosol the disulfide bond linking the 2 subunits is reduced and LC cleaves its target protein on synaptic vesicles, preventing their fusion with the cytoplasmic membrane and thus neurotransmitter release.

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Bio-activity	Measured by its ability to cleave the fluorogenic peptide substrate, SNAPtide. The specific activity is >1 pmol/min/μg, as measured under the described conditions.
Molecular Mass	50 kDa
Product-Related Proteins	1-425
Endotoxin	< 0.1 EU/μg of the protein as determined by the LAL method
Purity	> 95 % as determined by SDS-PAGE
Storage	At -80 centigrade. Avoid repeated freeze-thaw cycles.
Storage Buffer	PBS

GENE INFORMATION

Official Symbol	botA
Synonyms	botA; Botulinum neurotoxin type A2; Botulinum neurotoxin light chain
UniProt ID	Q45894

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