







# Recombinant Clostridium botulinum Botulinum neurotoxin type A (botA), partial

Product Code	CSB-EP320799CLQ
Relevance	Inhibits acetylcholine release. The botulinum toxin binds with high affinity to peripheral neuronal presynaptic mbrane to the secretory vesicle protein SV2. It binds directly to the largest luminal loop of SV2A, SV2B and SV2C. It is then internalized by receptor-mediated endocytosis. The C-terminus of the heavy chain (H) is responsible for the adherence of the toxin to the cell surface while the N-terminus mediates transport of the light chain from the endocytic vesicle to the cytosol. After translocation, the light chain (L) hydrolyzes the 197-Gln- -Arg-198 bond in SNAP-25, thereby blocking neurotransmitter release. Inhibition of acetylcholine release results in flaccid paralysis, with frequent heart or respiratory failure.
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P0DPI0
Alias	Bontoxilysin-A ;BOTOX
Product Type	Recombinant Protein
Immunogen Species	Clostridium botulinum
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	MPFVNKQFNYKDPVNGVDIAYIKIPNVGQMQPVKAFKIHNKIWVIPERDTFTNP EEGDLNPPPEAKQVPVSYYDSTYLSTDNEKDNYLKGVTKLFERIYSTDLGRML LTSIVRGIPFWGGSTIDTELKVIDTNCINVIQPDGSYRSEELNLVIIGPSADIIQFE CKSFGHEVLNLTRNGYGSTQYIRFSPDFTFGFEESLEVDTNPLLGAGKFATDP AVTLAHELIHAGHRLYGIAINPNRVFKVNTNAYYEMSGLEVSFEELRTFGGHDA KFIDSLQENEFRLYYYNKFKDIASTLNKAKSIVGTTASLQYMKNVFKEKYLLSED TSGKFSVDKLKFDKLYKMLTEIYTEDNFVKFFKVLNRKTYLNFDKAVFKINIVPK VNYTIYDGFNLRNTNLAANFNGQNTEINNMNFTKLKNFTGLFEFYKLLCVRGIIT
Lead Time	3-7 business days
Source	E.coli
Gene Names	botA
Expression Region	1-436aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-SUMO-tagged
Mol. Weight	66.0kDa





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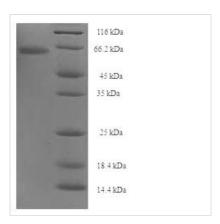




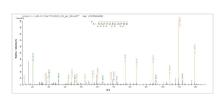
## **Protein Description**

#### **Partial**

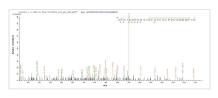
#### **Image**



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.



Based on the SEQUEST from database of E.coli host and target protein, the LC-MS/MS Analysis result of CSB-EP320799CLQ could indicate that this peptide derived from E.coli-expressed Clostridium botulinum botA.



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### **Description**

Amino acids 1-436 constitute the expression domain of recombinant Clostridium botulinum botA. The expected molecular weight for the botA protein is calculated to be 66 kDa. This botA recombinant protein is manufactured in e.coli. The N-terminal 6xHis-SUMO tag was smoothly integrated into the coding gene of botA, which enables a simple process of detecting and purifying the botA recombinant protein in the following steps.

Clostridium botulinum botulinum neurotoxin type A (botA) is a potent neurotoxin responsible for the development of botulism, a severe and potentially lifethreatening illness. BotA mainly functions to interfere with the release of acetylcholine, a neurotransmitter, from nerve terminals. It does so by cleaving specific proteins involved in synaptic vesicle fusion and neurotransmitter release, leading to muscle paralysis. This unique property makes it valuable for medical and cosmetic applications. Research on botA continues to explore its mechanisms of action, improve its safety profile, and discover new therapeutic applications.

#### Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.