Anti-Botulinum neurotoxin [MCS6-27] Standard Size Ab00508-10.3

This antibody was created using our proprietary Fc Silent™ engineered Fc domain containing key point mutations that abrogate binding to Fc gamma receptors.

This chimeric human antibody was made using the variable domain sequences of the original Mouse IgG1 format, for improved compatibility with existing reagents, assays and techniques.

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Isotype and Format: Human IgG1, Fc Silent™, Kappa
Clone Number: MCS6-27
Alternative Name(s) of Target: BBoNT/B
UniProt Accession Number of Target Protein:
Published Application(s): WB, ELISA
Published Species Reactivity: Clostridium botulinum
Immunogen: Recombinant BoNT/B fragments expressed in E. coli as GST-fusion proteins.
Specificity:
Application Notes: The antibody binds specifically to BoNT/B, a two-chain neurotoxic protein produced by the bacterium Clostridium botulinum. Botulism, an infection of the bacterium, which is commonly spread through contaminated food, can be a fatal disease, and symptoms include a gradual flaccid paralysis. Paralysis is caused by the internalization by endocytosis of the toxin in specific axons, mediated by the attachment of the heavy chain of the protein to axon surface. Once inside the axon, BoNT/B acts by cleaving SNARE proteins, such as VAMP, which are involved in the docking and fusion of neurosecretory vesicles. This prevents the release of the neurotransmitter acetylcholine, resulting in paralysis of the muscles. The monoclonal antibody MCS6-27 binds to the Hc and H5 fragments of BoNT/B, and the binding epitope is located in the heavy chain, between amino acids E859 and E1291. The monoclonal antibody is able to capture BoNT/B at SDS concentrations between 0 and 0.4 mM, and can be used to screen food samples for botulinum toxin.
Antibody First Published in: Scotcher MC, Cheng LW, Stanker LH. Detection of botulinum neurotoxin serotype B at sub mouse LD(50) levels by a sandwich immunoassay and its application to toxin detection in milk. PLoS One. 2010 Jun 10;5(6). PMID:20548779
Note on publication: Describes the characterization of monoclonal antibodies against BoNT/B, and the generation of a sensitive sandwich immunoassay.

Product Form

Size: 200 µg Purified antibody.
Purification: Protein A affinity purified
Supplied In: PBS with 0.02% Proclin 300.
Storage Recommendation: Store at 4ºC for up to 3 months. For longer storage, aliquot and store at -20ºC.
Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.

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