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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Anti-Botulinum neurotoxin type A [CR1] Bulk Size Ab00803-10.3-BT

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

Isotype and Format: Human IgG1, Fc Silent™, Kappa
Clone Number: CR1
Alternative Name(s) of Target: BoNT/A; BoNT; Botulinum neurotoxin; Bontoxilysin-A; Bontoxilysin A; BOTOX
UniProt Accession Number of Target Protein: P10845
Published Application(s): neutralize, FC
Published Species Reactivity: Clostridium
Immunogen: CR1 was produced by a yeast gene diversity library used to increase the affinitiy of scFv AR2 for BoNT/A2, while maintinaing high affinity binding to BoNT/A2. AR2 was generated after multiple rounds of affinity maturation of the humanized C25, which itself was created by CDR-grafting from the parental murine C25. Murine C25 was prepared by constructing a scFv phage display library from mice immunized with recombinant BoNT/A binding domain (Hc).
Specificity: CR1 binds to both BoNT/A1 and BoNT/A2 with high affinity (CR1 scfv: KD BoNT/A1 ~ 0.13 nM; KD BoNT/A2 ~ 0.4 nM. CR1 IgG: KD BoNT/A1 ~ 2.5 pM; KD BoNT/A2 ~ 1.7 nM.). CR1 Fab fragment binds to the BoNT/A1 binding domain, at the interface between the N-terminal lectin subdomain (HCN) and the C-terminal trefoil subdomain (HCC) at a discontinuous epitope consisting of β23-β24, β25-β26, β27-β28 and β35-β36 loops of the lectin subdomain and the C-terminus of the trefoil. Botulinum neurotoxin (BoNT) is secreted by Clostridial bacteria, and causes botulism which is characterized by flaccid paralysis and can be fatal without hospitalization. BoNT acts by inhibitnig acetylcholine release through binding with high affinity to SV2 on the presynaptic membrane and inducing its internalization by receptor-mediated endocytosis.
Application Notes: Antibody binding can be studied by FC and the antibody also shows in vivo neutralizing activity against botulinum neurotoxin - the neutralizing activity is increased when administered in combination with the human BoNT/A antibodies RAZ1 and 2G11.
Antibody First Published in: Garcia-Rodriguez et al. Molecular evolution of antibody cross-reactivity for two subtypes of type A botulinum neurotoxin. Nat Biotechnol. 2007 Jan;25(1):107-16. PMID:17173035
Note on publication: Describes the process of increasing AR2 antibody affinity for BoNT/A2 while maintaining high affinity binding to BoNT/A1. Thermodynamics of antiody binding to BoNT/A1 and BoNT/A2 were studied and the crsytal structure of the antibody complexed with BoNT/A1 was solved.

Product Form

Size: 1 mg Purified antibody in bulk size.
Purification: Protein A affinity purified
Supplied In: PBS only.
Storage Recommendation: Store at 4ºC for up to 3 months. Note, this antibody is provided without added preservatives, it is therefore recommed this antibody be handled under sterile conditions. 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.