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+1 484.791.3823

Datasheet for 100-401-894

Tetanus Toxin Fragment C Antibody

Overview

Description:	Anti-Tetanus Toxin Fragment C (RABBIT) Antibody - 100-401-894
Item No.:	100-401-894
Size:	100 µL
Applications:	ELISA, WB, Biochemical Assay
Reactivity:	Clostridium tetani
Host Species:	Rabbit

Product Details

Background:	Tetanus toxin C-fragment (TTc) is a non-toxic 52 kD polypeptide generated by papain cleavage of tetanus toxin, corresponding to the C-terminal 451 amino acids. The illness known as Tetanus is caused by a neurotoxin produced by the anaerobic bacterium Clostridium tetani. C. tetani is commonly found in soil, feces, and on many objects lying on the ground, such as rusty metal, hence puncture wounds are a common cause of tetanus. It acts upon the presynaptic membranes of both central and peripheral nervous systems to block the release of neurotransmitters. In its toxic form tetanus neurotoxin is a 150 kDa protein, consisting of two major components: a light chain and heavy chain. The light chain contains the enzymatic portion of the toxin and is responsible for its toxic effects. The heavy chain binds to the neuron and aids delivery of the light chain to the neuron interior. A single disulfide bond links light and heavy chains.
Synonyms:	rabbit anti-Tetanus Toxin Fragment C Antibody , TTfC, tentoxylysin, tetX
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	tetX
Reactivity:	Clostridium tetani
Immunogen Type:	Recombinant Protein

Immunogen:	This antibody was prepared from whole rabbit serum produced by repeated immunizations with a polyhistidine-tagged TTFC fusion protein expressed in E. coli corresponding to full length TTFC.
Purity/Specificity:	This antibody is directed against the C fragment of Tetanus toxin derived from Clostridium tetani. The product was prepared from monospecific antiserum by delipidation and defibrination. A BLAST analysis was used to suggest cross reactivity with Clostridium tetani. Cross-reactivity with TTFC from other sources have not been determined.
Relevant Links:	• NCBI - NP_783831.1 • UniProtKB - P04958 • GeneID - 1061100

Application Details

Tested Applications:	ELISA, WB
Suggested Applications:	Biochemical Assay (Based on references)
Application Note:	This antibody has been tested for use in ELISA and western blot. For western blots expect a band of approximately 52 kDa in size corresponding to full-length TTFC. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:50,000 - 1:250,000
WB:	1:1,000 - 1:40,000

Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	90 mg/mL by Refractometry
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice

Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images

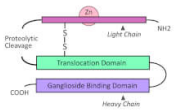
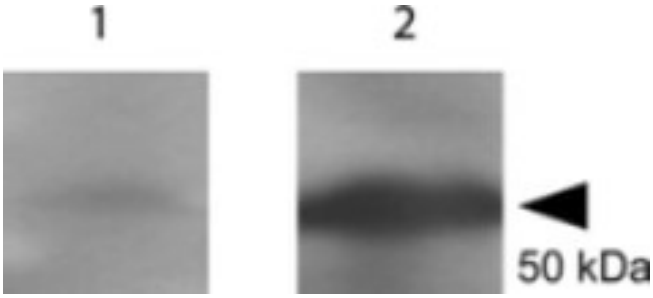
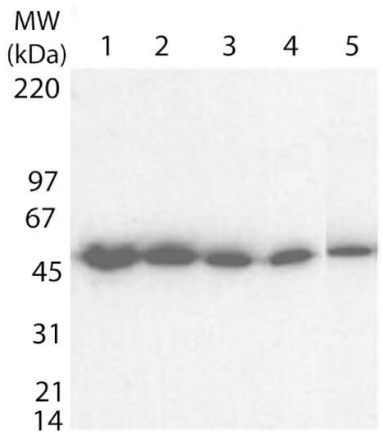


Diagram
Structure of Tetanus toxin. Fragment C is the non-toxic portion of the heavy chain that specifically binds neurons (ganglioside binding domain).



Western Blot
Western blot using Rockland's Anti-tetanus toxin C antibody shows detection of a protein band at 52 kDa corresponding to full length 6X HIS-TTFC fusion protein (arrowhead). Lane 1 shows no detection from non-specific antisera; Lane 2 shows detection of anti-TTFC. After blocking in 1% BSA, the membrane was probed with the primary antisera diluted to 1:1,000 in PBS followed by reaction with HRP conjugated Goat anti-Rabbit (p/n 611-1322-0500) at 1:20,000 dilution. Rockland's Picomax (p/n 020A & 020B) substrate was used to generate signal. Personal communication Lucia le Roux, MD Anderson Cancer Center.



Western Blot
Western blot using Rockland's Anti-tetanus toxin C antibody shows detection of a protein band at ~ 52 kDa corresponding to full length 6XHIS-TTFC fusion protein. Lanes 1-5 contain 10ng, 5ng, 2.5ng, 1.25ng and 0.0625ng protein respectively. MW markers are shown at the left for size comparison. After blocking, the membrane was probed with the primary antibody diluted to 1:100,000 followed by reaction with a 1:20,000 dilution of HRP conjugated donkey-anti-Rabbit IgG [H&L] (p/n 611-703-127). Personal communication Jonathan Francis, Mass General Hospital.

References

- Jianhong Li et al Recombinant GDNF: tetanus toxin fragment C fusion protein produced from insect cells. *Biochem Biophys Res Commun* . (2009)

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