

Datasheet for 100-401-894S

Tetanus Toxin Fragment C Antibody

Overview

Description:	Anti-Tetanus Toxin Fragment C (RABBIT) Antibody - 100-401-894S
Item No.:	100-401-894S
Size:	25 µL
Applications:	ELISA, WB, Biochemical Assay
Reactivity:	Clostridium tetani
Host Species:	Rabbit

Product Details

Background:	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:

- [UniProtKB - P04958](#)
- [NCBI - NP_783831.1](#)
- [GenelD - 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

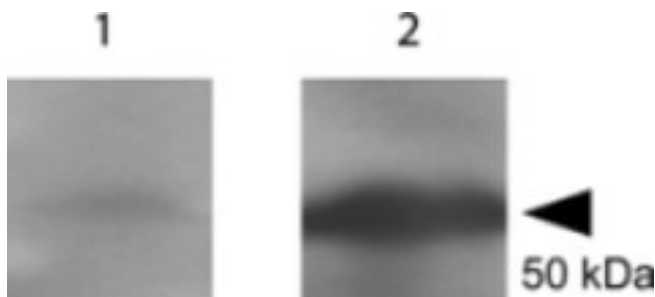
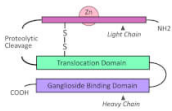
Storage Condition: Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.

Expiration: Expiration date is three (3) months from date of receipt.

Images

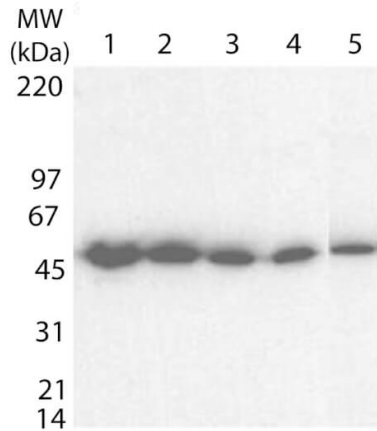
Diagram

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)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.