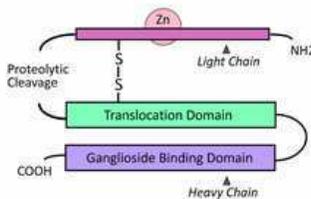


Product Specification Sheet

Tetanus Toxin (light chain) Antibodies

- | | | |
|-----------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------|
| <input type="checkbox"/> Cat. TTOX17-S | Rabbit Anti-C. tetani toxin Light-chain antiserum | Size: <input type="checkbox"/> 100 ul |
| <input type="checkbox"/> Cat. TTOX17-C | Recombinant purified tetani toxin Light-chain protein control for Western blot | Size: <input type="checkbox"/> 100 ul |

Tetanus, also known as lockjaw, is a disease caused by the bacteria *Clostridium tetani* which enters the body through open wounds and releases a poison called tetanospasmin. This is a potentially deadly disease because the poison attacks the nervous system blocking nerve signals from the spinal cord to and from the muscles. However this disease is preventable through injecting multiples doses of vaccines and administering the recommended booster shot every ten years. Tetanus vaccine is a vaccine composed of inactivated tetanus toxin. This vaccine is immunogenic not pathogenic and is used to prevent an individual from contracting tetanus.



Tetanus toxin is also called spasmogenic toxin, tetanospasmin or abbreviated to **TeTx** or **TeNT**. The tetanus toxin protein has a molecular weight of 150kDa. It is translated from the TetX gene as one protein which is subsequently cleaved into two parts: a 100kDa H-chain or heavy chain or B-chain and a 50kDa amino terminal light or A-chain (C-fragment). The light chain contains the enzymatic portion of the toxin and is responsible for its toxic effects. The light chain activity is abolished by a mutation at His233 to either Cys or Val or Glu234 to Gln. H-chain further cleavage into Hn (amino terminal) and Hc (carboxy terminal) fragments. The chains are connected by a disulfide bond. The B-chain binds to disialogangliosides (GD2 and GD1b) on the neuronal membrane and contains a translocation domain which aids the movement of the protein across that membrane and into the neuron. The A-chain, a zinc endopeptidase, attacks the vesicle-associated membrane protein (VAMP).

Tetanus toxin Hc-fragment has been tested as a subunit vaccine candidate and shown to elicit protective immunity. Similarly, **Tetanus light chain** has been shown to elicit protective immunity and the individuals vaccinated with the whole toxoid contain light chain antibodies. Toxoid refers to the inactivated version of the active toxin. It is typically produced by formaldehyde inactivation of the active protein. **Toxoid** refers to the inactivated version of the active toxin. It is typically produced by formaldehyde inactivation of the active protein.

Source of Antigen and Antibodies

Antigen	purified recombinant tetanus toxoid light chain
Ab Host/type	Rabbit, Polyclonal antiserum, (Cat # TTOX17-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve	Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Tetanus light chain (438-aa, >95%, ~50-52 kda) was expressed as His-tag protein and purified (>95%). For Western blot +ve control (**Cat # TTOX17-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **TTOX17-C** for good visibility with antibody Cat # **TTOX17-S**. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **TTOX17-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. It should not be used as quantitative standards as this is only meant to serve as mol. wt marker for the light chain. Do not freeze, thaw, or heat repeatedly.

Form & Storage
antiserum

- 100 ul solution lyophilized powder
- Buffer: PBS pH 7.4 and 0.05% azide
- Reconstitute powder** in 100 ul water

Stability: 6-12 months at -20oC or below.

Recommended Usage

Antibodies can be used for ELISA or Western, or IF to detect tetanus light chain or the toxoid.

General References: Farrar JJ (2000) J. Neurol. Neurosurg. Psych. 69, 292-301; Eisel U (1986) EMBO J. 5, 2495-2502; Shciavo G (1992) Nature 359, 832-835.

This product is for in vitro research use only.

Related material available from ADI

Catalog#	ProdDescription
930-100-TTH	Human Anti-Tetanus Toxin/Toxoid IgG ELISA kit, 96
930-110-TTM	Mouse Anti-Tetanus Toxin/Toxoid Ig's (G+A+M) ELISA kit, 96 tests, Quantitative
930-120-TMA	Mouse Anti-Tetanus Toxin/Toxoid IgA ELISA kit, 96
930-120-TTR	cc# change to 930-200-TTR; Rabbit Anti-Tetanus Toxin/Toxoid Ig's (G+A+M) ELISA kit
930-130-TMG	Mouse Anti-Tetanus Toxin/Toxoid IgG ELISA kit, 96
930-140-TMM	Mouse Anti-Tetanus Toxin/Toxoid IgM ELISA kit, 96
930-200-TTR	Rabbit Anti-Tetanus Toxin/Toxoid Ig's (G+A+M) ELISA kit, 96 tests, Quantitative
930-210-TRG	Rabbit Anti-Tetanus Toxin/Toxoid IgG ELISA kit, 96
930-220-TRM	Rabbit Anti-Tetanus Toxin/Toxoid IgM ELISA kit, 96 tests, Quantitative
930-310-TGG	G. pig Anti-Tetanus Toxin/Toxoid IgG ELISA kit, 96
930-320-TGM	G. pig Anti-Tetanus Toxin/Toxoid IgM ELISA kit, 96 tests, Quantitative
930-410-TKG	Monkey Anti-Tetanus Toxin/Toxoid IgG ELISA kit,
TTOX12-A	Anti-C. tetani purified toxin IgG (tetanus shock toxin)
TTOX13-A	Anti-C. tetani purified toxin IgG (tetanus shock toxin)
TTOX14-M	Monoclonal Anti-C. tetani purified toxin IgG (tetanus shock toxin)
TTOX17-S	Anti-C. tetani purified toxin IgG (tetanus shock toxin)
VAC-TTX-50	VacciGel Direct ELISA for the measurement of Tetanus Toxoid in Vaccines formulated in Alum, 50 tests
VAC-TTX-310	Tetanus Toxoid/Toxin (TTX) ELISA for the measurement TTX in biological buffer
TTOX17-S	140326A