

Product Specification Sheet  
**Tetanus Toxoid Protein**

**Cat.** TTOX15-N-25 Purified Tetanus Toxoid protein (antigen grade)

**Size:** □ 25 ug

Tetanus toxin is an extremely potent neurotoxin produced by the vegetative cell of *Clostridium tetani* in anaerobic conditions, causing tetanus. It has no known function for clostridia in the soil environment where they are normally encountered. It 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 heavy or B-chain and a 50kDa light or A-chain. 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 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, 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.

Toxoid refers to the inactivated version of the active toxin. It is typically produced by formaldehyde inactivation of the active protein.

**Source of Antigen**

Purified Tetanus toxin is obtained from *C. tetani* (>95%) and then inactivated by formaldehyde. Tetanus toxoid is supplied in a buffer (100 mM histidine, pH 7.0, 2.5% trehalose, and 10 mM NaCl) or lyophilized in the same buffer. Reconstituted with distilled water or an appropriate buffer. This preparation is biologically inactive but serve as good antigen. Store powder at -20oC and it is stable for at least 1 year. Store reconstituted solution at -20oC or below in suitable size aliquots..

The product must be treated as potentially toxic and care taken in using and handling of this product. This product should only be handled by qualified lab personnel. It is only produced for in vitro research use. ADI assumes no liability from the use or misuse of this product.

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

**Recommended Usage**

Purified protein can be used for ELISA, Western, antibody titration or as control protein for adjuvant.

**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 tests, Quantitative
930-110-TTM	Mouse Anti-Tetanus Toxin/Toxoid Ig's (G+A+M) ELISA kit, 2x96 tests, Quantitative
930-120-TMA	Mouse Anti-Tetanus Toxin/Toxoid IgA ELISA kit, 2x96 tests, Quantitative
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, 2x96 tests, Quantitative
930-140-TMM	Mouse Anti-Tetanus Toxin/Toxoid IgM ELISA kit, 2x96 tests, Quantitative
930-200-TTR	Rabbit Anti-Tetanus Toxin/Toxoid Ig's (G+A+M) ELISA kit, 2x96 tests, Quantitative
930-210-TRG	Rabbit Anti-Tetanus Toxin/Toxoid IgG ELISA kit, 2x96 tests, Quantitative
930-220-TRM	Rabbit Anti-Tetanus Toxin/Toxoid IgM ELISA kit, 2x96 tests, Quantitative
930-310-TGG	G. pig Anti-Tetanus Toxin/Toxoid IgG ELISA kit, 2x96 tests, Quantitative
930-320-TGM	G. pig Anti-Tetanus Toxin/Toxoid IgM ELISA kit, 2x96 tests, Quantitative
930-410-TKG	Monkey Anti-Tetanus Toxin/Toxoid IgG ELISA kit, 2x96 tests, Quantitative
RP-343	Recombinant Anti-Tetanus Toxoid scFv IgG
SP-66125-5	Tetanus toxin (TT) peptide (AA: Gln-Tyr-Ile-Lys-Ala-Asn-Ser-Lys-Phe-Ile-Gly-Ile-Phe-Glu) (MW: 1657.95)
SP-86741-1	TET 830 modified/T - helper epitope from tetanus toxoid (AA: Ala-Gln-Tyr-Ile-Lys-Ala-Asn-Ser-Lys-Phe-Ile-Gly-Ile-Thr-Glu-Leu) (MW: 1796.11)
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)
TTOX15-S	Anti-C. tetani purified toxin IgG (tetanus shock toxin)
VAC-TTX-300	VacciGel Direct ELISA for the measurement of Tetanus Toxoid in Vaccines formulated in Alum, 96 tests
VAC-TTX-310	Tetanus Toxoid/Toxin (TTX) ELISA for the measurement TTX in biological buffer
TTOX15-N-25	121203A

**India Contact:**

**Life Technologies (India) Pvt. Ltd.**

306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444  
Email: [customerservice@lifetechindia.com](mailto:customerservice@lifetechindia.com) Website: [www.lifetechindia.com](http://www.lifetechindia.com)