



Product Specification Sheet
Tetanus Toxoid Protein

Cat. TTOX15-N-1000 Tetanus Toxoid from *C. tetani* purified (700-1200 Lf/ml; cGMP vaccine grade, Low Endotoxin) **Size:** □ 1 mg

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* (>98%) and then inactivated by formaldehyde. Tetanus toxoid is supplied in normal saline (lot specific concn on the vial) 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 reconstituted solution at 4°C and it is stable for at least 1 year.

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.

Specifications

LF-content	>500 Lf/ml
Total protein	0.32mg/ml
pH	7.2
Ammonium	<1 ppm
Sulphate	<10 ppm
Formaldehyde	5 ug/ml
Toxins	none detectable in G. pig testing
Endotoxin	<3 USP EU/ml
Potency	>100 IU/ml
Appearance	clear light yellow liquid or powder
Sterility	Supplied sterile but we recommend using sterile filter upon use to ensure sterility

Recommended Usage

Lymphocyte stimulation tests (proliferation tests)
Induction and measurements of cytokine synthesis
Studies of antigen induced migration of monocytes/macrophages and other phagocytizing cells
ELISA
Immunization of experimental animals

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,
930-110-TTM	Mouse Anti-Tetanus Toxin/Toxoid Ig's ELISA kit
930-120-TMA	Mouse Anti-Tetanus Toxin/Toxoid IgA ELISA kit,
930-130-TMG	Mouse Anti-Tetanus Toxin/Toxoid IgG ELISA kit
930-140-TMM	Mouse Anti-Tetanus Toxin/Toxoid IgM ELISA kit
930-200-TTR	Rabbit Anti-Tetanus Toxin/Toxoid Ig's ELISA kit,
930-210-TRG	Rabbit Anti-Tetanus Toxin/Toxoid IgG ELISA kit
930-220-TRM	Rabbit Anti-Tetanus Toxin/Toxoid IgM ELISA kit
930-310-TGG	G. pig Anti-Tetanus Toxin/Toxoid IgG ELISA kit,
930-320-TGM	G. pig Anti-Tetanus Toxin/Toxoid IgM ELISA kit
930-410-TKG	Monkey Anti-Tetanus Toxin/Toxoid IgG ELISA kit
RP-343	Recombinant Anti-Tetanus Toxoid scFv IgG
SP-66125-5	Tetanus toxin (TT) peptide
SP-86741-1	TET 830 modified/T - helper epitope from tetanus toxoid
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
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-1000	180220AC