# Tetanus Toxoid (HYB 278-01): sc-58053



The Power to Question

### **BACKGROUND**

Clostridium tetani is a gram-positive, motile, obligate anaerobe commonly found in soil and animal feces. C. tetani produces tetanospasmin, a powerful exotoxin that cleaves synaptobrevin II, an important protein component of synaptic vesicles, thus blocking the activity of inhibitory interneurons in the central nervous system. This leads to tetanus in humans, an acute, often fatal disease that is characterized by chronic muscle contraction, especially in the head and neck, which can eventually lead to respiratory failure. C. tetani poses a dangrous threat to humans, so prevention is important. Tetanus Toxoid is a substance that was purified from tetanospasmin in 1,890, and it is currently used as a vaccine to to produce active immunity against tetanus or to help boost the immune response to other vaccines.

## **REFERENCES**

- Hendriksen, C. and Winsnes, R. 2002. Serological methods for potency testing of Tetanus Toxoid vaccines for human use. Dev. Biol. 111: 131-140.
- Katare, Y.K., Panda, A.K., Lalwani, K., Haque, I.U. and Ali, M.M. 2003. Potentiation of immune response from polymer-entrapped antigen: toward development of single dose Tetanus Toxoid vaccine. Drug Deliv. 10: 231-238.
- Tierney, R., Beignon, A.S., Rappuoli, R., Muller, S., Sesardic, D. and Partidos, C.D. 2003. Transcutaneous immunization with Tetanus Toxoid and mutants of *Escherichia coli* heat-labile enterotoxin as adjuvants elicits strong protective antibody responses. J. Infect. Dis. 188: 753-758.
- Seatovi, S., Ini-Kanada, A., Stojanovi, M., Zivkovi, I., Jankov, R.M. and Dimitrijevi, L. 2004. Development of sandwich enzyme-linked immunosorbent assay for determination of Tetanus Toxoid concentration. J. Immunoassay Immunochem. 25: 31-44.
- Wang, G., Molander, G., Koivuluhta, M., Alenius, H. and Lauerma, A. 2005.
  Decreased *in vitro* cellular response to Tetanus Toxoid and tuberculin in patients using topical corticosteroids. Acta Derm. Venereol. 85: 296-298.
- Bishop, N.C., Walker, G.J., Bowley, L.A., Evans, K.F., Molyneux, K., Wallace, F.A. and Smith, A.C. 2005. Lymphocyte responses to influenza and Tetanus Toxoid *in vitro* following intensive exercise and carbohydrate ingestion on consecutive days. J. Appl. Physiol. 99: 1327-1335.
- Gupta, P.N., Mishra, V., Singh, P., Rawat, A., Dubey, P., Mahor, S. and Vyas, S.P. 2005. Tetanus Toxoid-loaded transfersomes for topical immunization. J. Pharm. Pharmacol. 57: 295-301.
- 8. Danilova, E., Shiryayev, A., Kristoffersen, E.K. and Sjursen, H. 2005. Attenuated immune response to Tetanus Toxoid in young healthy men protected against tetanus. Vaccine 23: 4980-4983.
- Mann, J.F., Scales, H.E., Shakir, E., Alexander, J., Carter, K.C., Mullen, A.B. and Ferro, V.A. 2006. Oral delivery of Tetanus Toxoid using vesicles containing bile salts (bilosomes) induces significant systemic and mucosal immunity. Methods 38: 90-95.

## **SOURCE**

Tetanus Toxoid (HYB 278-01) is a mouse monoclonal antibody raised against full length formaldehyde inactivated Tetanus Toxoid.

#### **PRODUCT**

Each vial contains 100  $\mu g\ lgG_1$  in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

### **APPLICATIONS**

Tetanus Toxoid (HYB 278-01) is recommended for detection of Tetanus Toxoid and toxin of *Clostridium tetani* origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

### **SELECT PRODUCT CITATIONS**

- Jain, N.K. and Roy, I. 2011. Accelerated stability studies for moistureinduced aggregation of tetanus toxoid. Pharm. Res. 28: 626-639.
- Solanki, V.A., Jain, N.K. and Roy, I. 2011. Stabilization of tetanus toxoid formulation containing aluminium hydroxide adjuvant against freezethawing. Int. J. Pharm. 414: 140-147.
- Solanki, V.A., Jain, N.K. and Roy, I. 2012. Stabilization of tetanus toxoid formulation containing aluminium hydroxide adjuvant against agitation. Int. J. Pharm. 423: 297-302.
- Jain, N.K., Jetani, H.C. and Roy, I. 2013. Nucleic acid aptamers as stabilizers of proteins: the stability of tetanus toxoid. Pharm. Res. 30: 1871-1882.

# **STORAGE**

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

# **RESEARCH USE**

For research use only, not for use in diagnostic procedures.

#### **PROTOCOLS**

See our web site at www.scbt.com for detailed protocols and support products.

**Santa Cruz Biotechnology, Inc.** 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**