

Anti-Clostridium septicum α toxin antibody, rabbit polyclonal

Product code	64-042
Size	100 μ g
Shipping and Storage	-20°C
Concentration	1.0 mg/ml
Buffer	PBS ⁻ with 50% glycerol
Purity	Purified IgG fraction with protein A from rabbit antiserum.
Immunogen	Formaldehyde-inactivated C. septicum α -Toxin
Isotype	Rabbit IgG
Reactivity	C. septicum α -Toxin
Special notes	N/A
Application	1. Western blotting (1/1000~1/5000 dilution) (Fig.1) 2. ELISA (Assay dependent)
Background	Following the infection, Clostridium septicum produces α -Toxin, the causative agent of atraumatic gas gangrene. Precursor of α -Toxin is expressed as the 49.8 kDa pre-pro form composed of 443 amino acids, and changed to the 46.5 kDa pro-Toxin of 412 residues by removal of the 31 amino acid signal peptide during secretion. This pro-Toxin is further activated by trypsin cleavage between Arg-367 and Ser-368 in its carboxyl terminus and becomes the mature form of the 41.3 kDa peptide. Active α -Toxin can oligomerize into hexamer or heptamer complexes that form ion-permeable channels across cell membranes, suggesting that α -Toxin treated cells are lysed by an ion-release process.
Data Link	UniProtKB Q53482 (Q53482 CLOSE)
Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.	

Data Images: 64-042 Anti-Clostridium septicum α toxin antibody, rabbit polyclonal

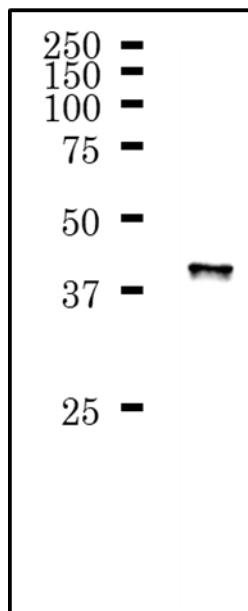


Fig 1. Western blot of α -Toxin.

10 ng of α -Toxin was separated by 12% SDS-PAGE and blotted into a PVDF membrane by a wet-blotting apparatus at 15V over night. The blotted membrane was blocked with 5% skim milk, and treated with this antibody at 1/5,000 dilution. After washing, the membrane was further treated with Goat Anti-Rabbit IgG H & L (HRP) (Abcam 97051) as the secondary antibody at 1/10,000 dilution. The reacted bands were visualized with Immunostar Zeta (Wako 291-72401).

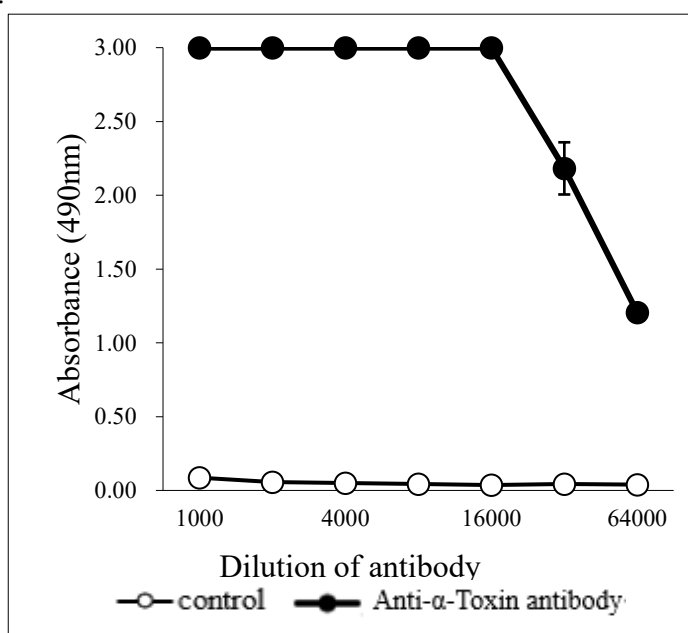


Fig.2 ELISA of α -Toxin.

Sample: 1.4 ug per well.

References:

1. J Ballard, J Crabtree, B A Roe, R K Tweten "The primary structure of Clostridium septicum alpha-toxin exhibits similarity with that of Aeromonas hydrophila aerolysin." Infect Immun. Jan;63(1):340-4. (1995) PMID: [7806374](https://pubmed.ncbi.nlm.nih.gov/7806374/)
2. B R Sellman, R K Tweten "The propeptide of Clostridium septicum alpha toxin functions as an

intramolecular chaperone and is a potent inhibitor of alpha toxin-dependent cytolysis” *Mol Microbiol.* Aug;25(3):429-40 (1997). PMID: [9302006](#)

3. V M Gordon 1 , R Benz, K Fujii, S H Leppla, R K Tweten “Clostridium septicum alpha-toxin is proteolytically activated by furin” *Infect Immun.* Oct;65(10):4130-4. (1997) PMID: [9317018](#)
4. J Ballard, A Bryant, D Stevens, R K Tweten “Purification and characterization of the lethal toxin (alpha-toxin) of Clostridium septicum” *Infect Immun.* Mar;60(3):784-90. (1992) PMID: [1541552](#)
5. W P Yonushonis, M J Roy, R J Carman, R E Sims “Diagnosis of spontaneous Clostridium spiroforme iota enterotoxemia in a barrier rabbit breeding colony” *Lab Anim Sci* . 1987 Feb;37(1):69-71. PMID: [3586608](#)