Anti-C. septicum α-Toxin antibody, rabbit polyclonal

64-042 100 μg

Shipping and Storage: Ship at 4℃ and store at -20℃.

Reactivity: C. septicum α-Toxin

Immunogen: Formaldehyde-inactivated C. septicum α-Toxin

Applications:

1) Western blot (1/1,000-1/5,000) (Fig.1)
2) ELISA (assay dependent)

Form: IgG (affinity-purified with Protein A) 1mg/ml in PBS with 50% glycerol. Filter-sterilyzed

Background: Following the infection, Clostridium septicum produces α-Toxin, the causative agent of atraumatic gas gangrene. Precursor of α-Toxin is expressed as the 49.8kDal pre-pro form composed of 443 amino acids, and changed to the 46.5kDal 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 41.3kDal 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)

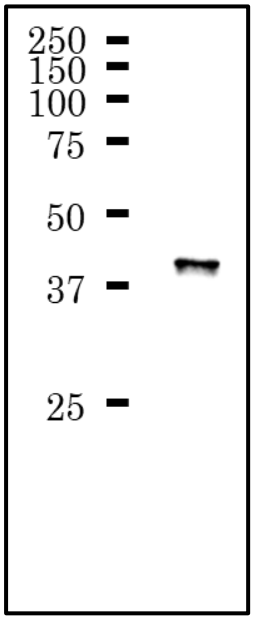

Fig 1. Western blot of α-Toxin.
10 ng of α-Toxin was separated by 12% SDS-PAGE and blotted into a PVDF membrane by a wet-blotting apparatus at 15V over night. The blotted membrane was blocked with 5% skim milk, and treated with this antibody at 1/5,000 dilution. After washing, the membrane was further 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).

References:

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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