Bacillus anthracis spore antigen (7827): sc-58091



The Power to Question

BACKGROUND

The genus *Bacillus* consists of aerobic, Gram-positive, spore-forming, rod-shaped bacterium. *Bacillus anthracis* causes anthrax, an acute infectious disease of cattle, sheep, goats, camels, antelopes and other herbivores that is highly lethal in some forms. Infection can occur in humans when exposed to infected animals or tissue from infected animals via three routes: cutaneous, inhalation and intestinal. *Bacillus anthracis* spores persist (as spores) in the soil for many years as they are resistant to heat, cold, radiation, desiccation and disinfectants. *In vivo, Bacillus anthracis* produces a polypeptide (polyglutamic acid) capsule that protects it from phagocytosis. The virulence factors of *Bacillus anthracis* are its capsule and three component toxin, both encoded on plasmids.

REFERENCES

- 1. Dragon, D.C. and Rennie, R.P. 1995. The ecology of anthrax spores: tough but not invincible. Can. Vet. J. 36: 295-301.
- Varughese, M., Chi, A., Teixeira, A.V., Nicholls, P.J., Keith, J.M. and Leppla, S.H. 1998. Internalization of a *Bacillus anthracis* protective antigen-c-Myc fusion protein mediated by cell surface anti-c-Myc antibodies. Mol. Med. 4: 87-95.
- Turnbull, P.C. 1999. Definitive identification of Bacillus anthracis—a review. J. Appl. Microbiol. 87: 237-240.
- 4. Mock, M. and Fouet, A. 2001. Anthrax. Annu. Rev. Microbiol. 55: 647-671.
- 5. Williams, D.D. and Turnbough, C.L., Jr. 2004. Surface layer protein EA1 is not a component of *Bacillus anthracis* spores but is a persistent contaminant in spore preparations. J. Bacteriol. 186: 566-569.
- Crawford, M.A., Aylott, C.V., Bourdeau, R.W. and Bokoch, G.M. 2006. Bacillus anthracis toxins inhibit human neutrophil NADPH oxidase activity. J. Immunol. 176: 7557-7565.
- 7. Jinbiao, L., Dong, W., Guozhi, W. and Yefu, W. 2008. High-level expression and single-step purification of recombinant *Bacillus anthracis* protective antigen from *Escherichia coli*. Biotechnol. Appl. Biochem. 52: 107-112.
- 8. Shaw, C.A. and Starnbach, M.N. 2008. Both CD4+ and CD8+ T cells respond to antigens fused to anthrax lethal toxin. Infect. Immun. 76: 2603-2611.
- 9. Yan, M., Roehrl, M.H., Basar, E. and Wang, J.Y. 2008. Selection and evaluation of the immunogenicity of protective antigen mutants as anthrax vaccine candidates. Vaccine 26: 947-955.

SOURCE

Bacillus anthracis spore antigen (7827) is a mouse monoclonal antibody raised against *Bacillus anthracis*.

PRODUCT

Each vial contains 100 $\mu g \; lg G_{2a}$ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

Bacillus anthracis spore antigen (7827) is recommended for detection of spore antigen specific to *Bacillus anthracis* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

Molecular Weight of Bacillus anthracis spore antigen: 92 kDa.

STORAGE

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

PROTOCOLS

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

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