SANTA CRUZ BIOTECHNOLOGY, INC.

Diphtheria Toxin A (7F2): sc-51869

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Corynebacterium diphtheriae is a Gram-positive, nonmotile aerobic bacteria found in soil and animal feces. C. diphteriae bacteria infect the epithelial cells of the upper respiratory tract and, from there, produce and secrete a potent toxin which is absorbed and disseminated through lymph channels and blood to the susceptible tissues of the body. Diphtheria Toxin catalyzes the ADP-ribosylation and inactivation of eEF-2. The structure of Diphtheria Toxin reveals a Y-shaped molecule of three domains: a catalytic domain (fragment A), whose fold is of the $\alpha + \beta$ type; a transmembrane (TM) domain consisting of nine α-helices, two pairs of which may participate in pH-triggered membrane insertion and translocation; and a receptor-binding domain, which forms a flattened β-barrel with a jelly-roll-like topology. Together the TM- and receptor binding-domains constitute fragment B.

REFERENCES

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3. Moloney, P.J., et al. 1932. The effect on solutions of diphtheria toxin and diphtheria antitoxin of contact with certain surfaces. Biochem. J. 26: 1754-1761.
4. Eaton, M.D. 1936. The purification and concentration of diphtheria toxin: II. Observations on the nature of the toxin. J. Bacteriol. 31: 367-383.
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6. Pappenheimer, A.M. 1942. Studies on diphtheria toxin and its reaction with antitoxin. J. Bacteriol. 43: 273-289.
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8. Pappenheimer, A.M. 1977. Diphtheria toxin. Annu. Rev. Biochem. 46: 69-94.
9. Donovan, J.J., et al. 1981. Diphtheria toxin forms transmembrane channels in planar lipid bilayers. Proc. Natl. Acad. Sci. USA 78: 172-176.

SOURCE

Diphtheria Toxin A (7F2) is a mouse monoclonal antibody raised against Diphtheria Toxoid A.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Diphtheria Toxin A (7F2) is recommended for detection of epitope exposed on free A subunit and on whole Diphtheria Toxin molecule of *Corynebacterium diphtheriae* origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of Diphtheria Toxin A: 21 kDa.

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.