Dermonecrotic Toxin from *Bordetella bronchiseptica*, functional

01-505 10 μg

Dermonecrotic toxin (DNT) is a common toxin produced by pathogenic bacteria belonging to the genus *Bordetella, such as B. pertussis, B. parapertussis,* and *B. bronchiseptica*. This toxin activates small GTP-binding proteins such as Rho, Rac and Cdc42 through deamidation or polyamination for downstream signaling pathways.

DNT was purified from *B. bronchiseptica* strain S798 by propriety chromatography and differential precipitation method.

Applications

1) For the studies of the signaling pathways mediated small GTP-binding proteins.
2) Antigen to be used for detection of infection of *Bordetella* by immunological method.

Specifications

Activity: DNT at 5 ng/ml induces ballooning morphological change in cultured mouse osteoblastic cell line MC3T3-E1.

Purity: More than 95 % pure by SDS-PAGE (CBB staining)

Form: 0.53 mg/ml of DNT in 50 mM sodium phosphate buffer (pH 7.2), 1 M urea, 0.3 M sodium sulfate, filter-sterilized.

Storage: 4℃

Reference: The equivalent DNT was used in Ref. 1 & 2.

1. Masuda, M, et.al. EMBO J., 19:521-530 (2000)
2. Horiguchi, Y, et.al. FEMS Microbiol.Lett., 66:39-43 (1990)

***This product is only for research use, not to be used for human .**

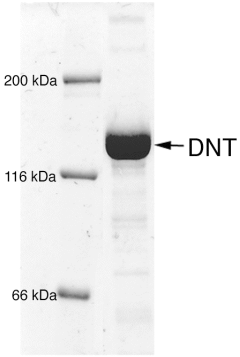
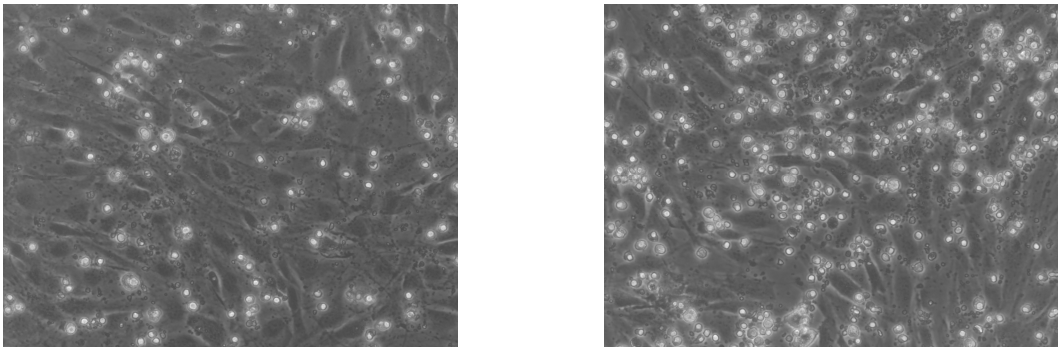


Fig 1. SDS polyacrylamide gel electrophoresis of dermonecrotic Toxin. (right)

Fig 2. Morphological change of mouse MC3T3-E1 cells induced by by DNT at 5 ng/ml, incubated for 24 h at 37℃ (below).

DNT(-) DNT 5 ng/ml



MSDS (Material Safety Data Sheet) is in the next page

Material Safety Data Sheet
Dermonecrotic Toxin

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Dermonecrotic toxin highy purified from the cells of *B. bronchiseptica* strain S798 at 100~1,000 μg/ml in 50 mM sodium phosphate buffer (pH 7.2), 1 M urea, 0.3 M sodium sulfate, filter-sterilized.

The toxin concentrations are dependent on lot.

Health Hazard Data

The LD_{50} of dermonecrotic in mice is 6.1 ng/mouse by intraperitoneal injection. There is no data about the toxicity in human.

Emergency Procedure

If the toxin is accidentally swallowed, induce vomiting.

If skin pricking should occur accidentally, bleed and perform vigorous flushing of the area with large amounts of water. If injection should occur, seek a physician' attention immediately..

Handling

It should be handled carefully by persons with expertise in knowledge and techniques for the safe handling of bacterial toxins. Avoid mouth pipetting. Wear protective gloves when handling the toxin. Avoid contact with open wounds. Wash thoroughly any area of the body that makes contact with the toxin.

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Inactivation

The toxin can be inactivated by boiling for 30 min.