

Diphtheria Toxin

01-517 200 µg

This Diphtheria toxin was highly purified from growth media as an exotoxin secreted by *Corynebacterium diphtheriae* strain PW8. Diphtheria toxin is a single polypeptide chain of 535 amino acids (58 kD) consisting of two subunits linked by disulfide bridges. Binding to the cell surface of the less stable of these two subunits allows the more stable part of the protein to penetrate the host cell. It catalyzes the ADP-ribosylation eucaryotic elongation factor-2 (eEF2) by using NAD, thus inactivating this protein. It does so by ADP-ribosylating the unusual aminoacid diphthamide. In this way, it acts as an inhibitor of protein synthesis.

Applications

- 1) Inhibition of protein synthesis in eukaryotic cells
- 2) Negative selection agent for ES cells in construction of transgenic mouse
(Yagi T. et al Analical Biochem 214:70 (1993))
- 3) Putative drug for treatment malignant tumors such as leukemia.

Specifications

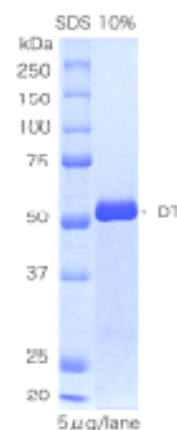
Activity test: Addition of this diphtheria toxin to 20 ~30 pg/ml in growth medium for 43 h caused 50% lethality of Vero cells

Purity: More than 95% pure by SDS-PAGE (see below; SDS-PAGE without mercaptoethanol)

Form: 5 mg/ml in 20 mM Tris-Hcl (pH 7.2), 150 mM NaCl

Storage: -70°C

- References**
1. Uchida T. et al. J. Biol. Chem. 248:3851 (1973)
 2. Pappenheimer A *Annu Rev Biochem* 46 : 69 ((1977).



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