Cholera Toxin A-subunit, functional

01-521　　50 μg

Storage: Ship with dry-ice and store at -80℃.

Applications:

1) ADP ribosylation assay

2) Study of signal transduction

Form: 1.6 mg/ml in 20 mM Tris-HCl pH 8.2, 0.2M NaCl, 10% glycerol, sterilized by filtration

Purity: No contamination of B-subunit as examined by SDS-PAGE and morphological changes of the treated cells.

Background: Cholera toxin, a main enterotoxin, interacts with G proteins and increases cyclic AMP in the intestinal lining to open ion channels. As ions flow into the intestinal lumen (lining), body fluids (mostly water) flows out of the body due to osmosis leading to massive diarrhea as the fluid is expelled from the body. Cholera toxin is a complex consisting of one molecule of A subunit (27.2 kDa) and 5 molecules of B subunit (11.6 kDa). It adsorbs to GM1 ganglioside on the surface of target cells by B subunit and penetrates into cells where A subunit is dissociated and processed into A1, which constitutively activates adenyl cyclase activity of α subunit of Gs (a kind of GTP-binding protein) by ADP ribosylation activity.

This product was highly purified from purified Cholera toxin produced by *V. cholerae*, Inaba 569B strain by gel-filtration (in the presence of urea) and ion-exchange chromatography.

Data Link UniProtKB/Swiss-Prot P01555 (CHTA_VIBCH)

References:

1. Hirst TR & D'Souza in The *Comprehensive Sourcebook of Bacterial Protein Toxins.* 3rd ed. p 270-290, Academic Press (2006)
2. Finkelstein RA and LoSpalluto JJ "Pathogenesis of experimental cholera. Preparation and isolation of choleragen and choleragenoid." *J Exp Med* **130**: 185-202 (1969) PMID: 4978880
3. Iijima Y and Honda T "Enterotoxin of Vibrio Cholerae." In *Recent Advances in Marine Biotechnology,* Fingerman M and Nagabhushanam R edt. Science Pub. Inc.**7**: 41 (2002)

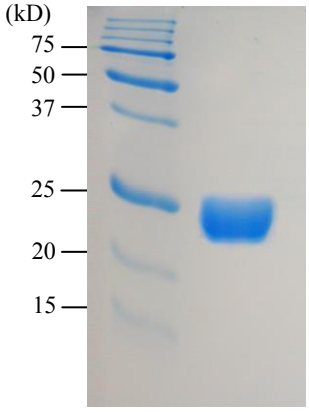

Fig.1 SDS-PAGE of the purified Cholera toxin A-subunit (27.2 kDa)

*** Only for research use, and not for human use.**

***Material Safety Data Sheet is not attached, since the A-subunit is not toxic.**

Related Products: **# 01-511 Cholera Toxin** **# 01-525 Cholera Toxin B-subunit**

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