

Cholerae Toxin

01-511 100 µg

The main enterotoxin, known as **cholera toxin**, 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. Cholerae toxin is a complex consisting of one molecule of A subunit (27.2 kD) and 5 molecules of B subunit (11.6 kD). It adsorbs to GM1 ganglioside on the surface of target cells by the B subunit and penetrates into cells where A

subunit is dissociated and processed into A1, which constitutively activates adenyl cyclase activity of asubunit of Gs (a kind of GTP-binding protein).

This toxin was highly purified from growth medium of *Vibrio cholerae* 569B strain.

Applications

1) Detection of GTP-binding protein Gsa

- 2) Detection of a low molecular weight GTP-binding protein, ARF
- 3) Manipulation of culture cells to increase cellular concentration of cyclic AMP.

Specifications

Activity test: Addition of this cholerae toxin at ~ 1 ng/ml to the culture

medium changed more than 50% of Vero cells into spindle shape.

Purity: More than 90% pure (see below; SDS-PAGE)

Form: 400 ug/ml in 50 mM Tris-HCl (pH7.5) 0.2 M NaCl 1mM Na2EDTA

10% Glycerol

Storage: -70℃

Ref. Hirst TR &D'Souza in The Comprehensive Sourcebook of Bacterial Pro Toxins

3rd Ed. p 270-290 Academic Press (2006)



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