

PRODUCT INFORMATION



Cholera Toxin (azide free)

Item No. 19654

Overview and Properties

Synonyms:	Cholera toxin, CT
Contents:	Each vial contains 1 mg of lyophilized cholera toxin (CT). When reconstituted to 0.5 ml with water, the buffer is 0.05 M Tris, 0.2 M sodium chloride, 0.001 M disodium EDTA at pH 7.5
Storage:	2-8°C (as supplied)
Stability:	≥2 years
Purity:	≥95% (estimated by SDS-PAGE)
Protein	
Concentration:	Determined by absorbance at 280 nm using an extinction coefficient of 1.14 for a 1 mg/ml solution
Activity:	Exhibited hemagglutination activity at <2 ug/ml when assessed using G _{M1} fixed sheep red blood cells
Special conditions:	Handle gently; do not vortex; do not freeze

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Description

Cholera toxin is produced by *V. cholerae* and is a multimeric enterotoxin that consists of a single A subunit surrounded by five B subunits.¹ Following binding to the membrane of enteric cells, the toxin is endocytosed and travels to the endoplasmic reticulum where the enzymatically active A subunit (CTA1) is translocated to the cytosol. Within the cytosol, CTA1 catalyzes the ADP-ribosylation of the G_sα protein, which activates adenylate cyclase, locking it in an 'on' position.² The increased intracellular concentration of cAMP causes hypersecretion of chloride and bicarbonate ions, which results in increased fluid secretion and severe diarrhea characteristic of the disease cholera.¹

References

1. Cho, J.A., Chinnapen, D.J.F., Amar, E., *et al.* Insights on the trafficking and retro-translocation of glycosphingolipid-binding bacterial toxins. *Front. Cell. Infect. Microbiol.* **2(51)** (2012).
2. van Heyningen, S. and King, C.A. Subunit A from cholera toxin is an activator of adenylate cyclase in pigeon erythrocytes. *Biochem. J.* **146(1)**, 269-271 (1975).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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