Clostridium perfringens Enterotoxin alpha

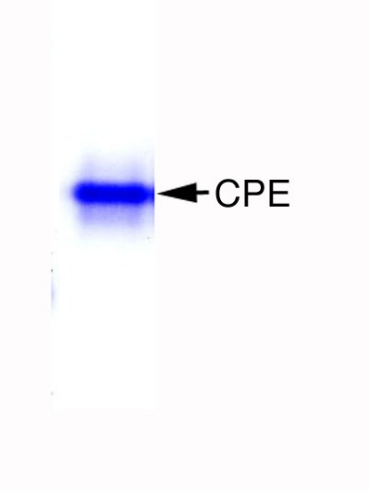
Product code	01-509
Size	50 μg
Storage	Ship at 4 ℃ or -20 ℃ and store at -20 ℃ or at -80 ℃ for longer storage.
Product Description	This product was highly purified from *Clostridium perfringens,* strain NCTC8239 by the method of Sakaguchi et al [1]. The molecular weight is 35 kD.
Concentration	0.4 mg/ml (Lot.2)
Buffer	50% glycerol, 10 mM sodium phosphate buffer (pH 6.7)
Purity	Over 95% purity by non-denaturing polyacrylamide gel electrophoresis (CBB staining)
Application	1) For the study of Claudin localization in cells 2) For the study of tight junctions
Biological Activity	The cytotoxic activity was examined by using Vero cells. The surviving fraction of the cells exposed to 1 ug/ml of CPE for 30 min was less than 40%.
Background	*Clostridium perfringens* enterotoxin (CPE) is a protein toxin produced by Gram-positive bacteria, *C. perfringens.* CPE destroys cell membrane structure of animals by its phospholipase activity after binding to the membrane of Claudin family proteins, which are components of tight junction of epithelial cell membrane. CPE binds to Claudins 3, 4, 6, 7, 8 and 14, but not to Claudins 1, 2, 5 and 10.
Health Hazard Data	The LD_{50} of pertussis toxin is 3~5 μg/kg in mice and 13 μg/kg in sheep and calf by intravenus injection. The toxicity of CPE is less than 1/2,000 of that of botulinus and tetanus toxins.
Emergency Procedure	If the toxin is accidentally swallowed, induce vomiting. If skin pricking occurs accidentally, bleed and perform vigorous flushing of the area with large amounts of water. If injection occurs, seek a physician's advice 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 on handling the toxin. Avoid contact with open wounds. Wash thoroughly any area of the body that makes contact with the toxin.
Inactivation	The toxin is relatively heat-resistant but it can be inactivated by boiling for 30 min. * It is not for use in humans and is not to be used as a diagnostic agent
Data Link	P01558 (ELTB_CLOPE)

Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.

BioAcademia,Inc. Tel. 81-6-6877-2335 Fax. 81-6-6877-2336 info@bioacademia.co.jp https://www.bioacademia.co.jp/en/

Data Images: 01-509 Clostridium perfringens Enterotoxin alpha

Fig.1 Nondenaturing polyacrylamide



.

References:

1. Sakaguchi, G. *et al.*, "Simplified method for purification of Clostridium perfringens type A enterotoxin." *Appl. Microbiol.* **26**:762-767 (1973) PMID: 4357653
2. Fujita, K. *et al.* "Clostridium perfringens enterotoxin binds to the second extracellular loop of claudin-3,a tight junction integral membrane protein." *FEBS Lett.* **476**: 258-261 (2000) PMID: 10913624

BioAcademia,Inc. Tel. 81-6-6877-2335 Fax. 81-6-6877-2336 info@bioacademia.co.jp https://www.bioacademia.co.jp/en/