Anti- CPE (*Clostridium perfringens* Enterotoxin) antibody, rabbit polyclonal

Product code	64-052
Size	200 µg
Storage	-20℃
Concentration	4.0 mg/ml
Buffer	PBS- with 50% glycerol
Purity	Purified IgG fraction with protein A from rabbit antiserum.
Immunogen	Highly purified enterotoxin from *Clostridium perfringens,* strain NCTC8239 (BioAcademia 01-509)
Isotype	Rabbit IgG
Reactivity	*Clostridium perfringens* enterotoxin.(food-poisoning strains)
Special notes	N/A
Application	1. Western blot (1/1,000-1/2,000) 2. Dot blot (1/20,000- 1/100,000) 3. Immunoprecipitation (1/200-1/500) 4. ELISA (1/1,000)
Background	*Clostridium perfringens* enterotoxin (CPE) is a protein toxin produced by majority of *C. perfringens* strains (type A, C, D and E strains) responsible for food poisoning and gastrointestinal disease. 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. **For detail, refer to** 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
Data Link	UniProtKB 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: 64-052 Anti- CPE (Clostridium perfringens Enterotoxin) antibody, rabbit polyclonal

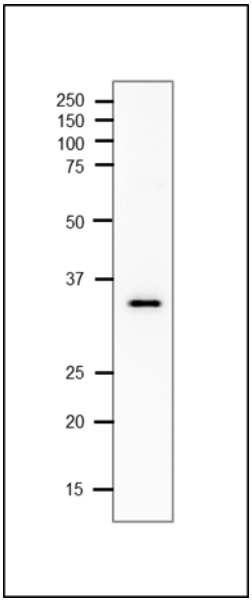

Fig.1 Western Blot of CPE in the culture supernatant of *C. perfringens* .

The proteins in the sample were separated on 12.5% SDS-PAGE.

Blotted at 15V, overnight in wet system, on PVDF membrane.

Blocked by shaking with 5% skim milk 1 h and washed with TBST buffer.

Anti-CPE antibody was used at 1μg/ml and incubated at room temperature for 1 h. The membrane was incubated in TBST buffer for 5 min and washing was done 3 times with the same buffer.

Second antibody, goat anti-rabbit IgG H & L (HRP) (ab97051) was used at 1/20,000 and incubated for 1 h at room temperature. Washing was done 3 times as before with TBST buffer.

Visualized with BioRad ECL system.

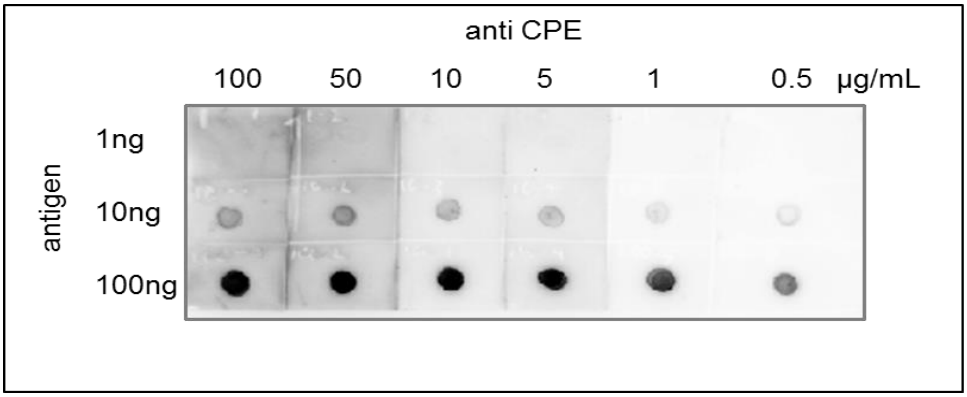

Fig.2 Dot blot of CPE with anti-CPE antibody.

Indicated amounts of purified *C.perfringence* enterotoxin were spotted on nitrocellulose membrane and reacted with the indicated concentrations of anti-CPE antibody for 60 min. As the second antibody, goat anti-rabit IgG H & L (HRP) (ab97051) was reacted at 1/20,000 dilution for 60 min.

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

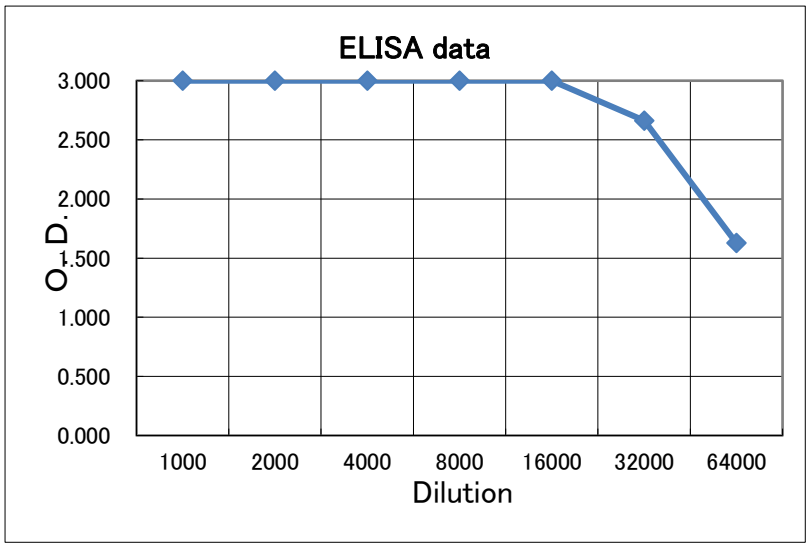

Fig.3. Titration of the anti-CPE antibody activity of the antibody by Indirect ELISA

Plate was coated with 0.2 µg of *C.perfringens* Enterotoxin (#01-509) per well and 100 µl of anti-*C.perfringens* Enterotoxin antibody at the indicated dilution was added to each well and incubated. After washing, goat anti-rabbit-IgG conjugated with HRP was added as a secondary antibody. Color was developed with TMB as substrate. After washing, goat anti-rabbit-IgG conjugated with HRP (ab97051) was added as a secondary antibody. Color was developed with TMB as substrate. Optical density (O.D.) was measures at 490 nm.

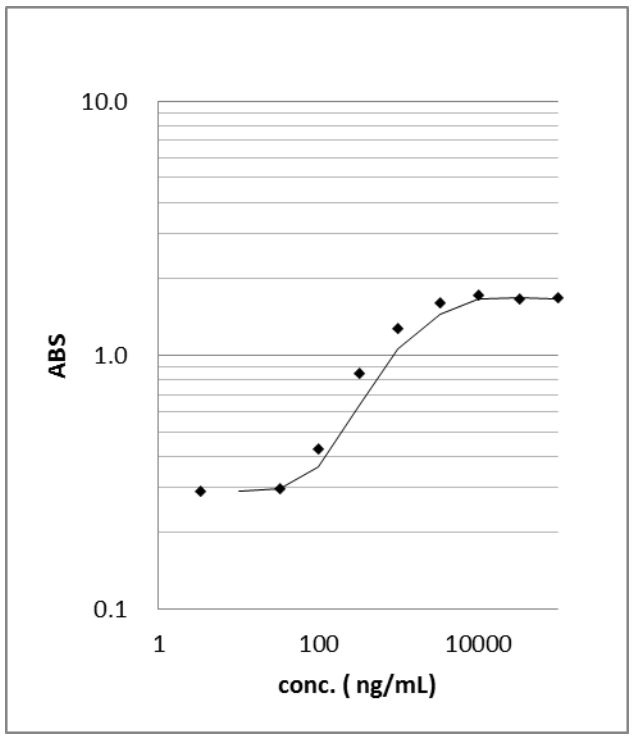

Fig.4. Titration of enterotoxin of *C. perfringens* by indirect ELISA using th anti-CPE antibody.

ELISA plate was coated with 100 µl of indicated concentration of *C. perfringens* enterotoxin per well. The anti-CPE antibody was used at 1/1,000 dilution. ELISA was performed as in Fig.2.

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