

Anti-*Clostridium perfringens* α toxin (C-domain) antibody, mouse monoclonal (cp-01)

Product code	64-054
Size	100 μ g
Storage	-20°C
Concentration	1.0 mg/ml
Buffer	PBS ⁻ with 50% glycerol
Purity	Purified IgG fraction with protein A
Immunogen	Culture supernatant of <i>Clostridium perfringens</i> (<i>C. perfringens</i>)
Isotype	mouse IgG2bk
Reactivity	Reacts with α toxin (PLC) C-domain of <i>C. perfringens</i> . Does not react with other food poisoning bacteria.
Validation	Specificity has been validated by ELISA and western blotting
Application	1. Western blotting: x1/400-800 (Fig.1) 2. Immunofluorescence: x1/400 (Fig.2)
Background	<i>Clostridium perfringens</i> is one of the major causative agents of food poisoning. <i>C. perfringens</i> produces various enzymes and toxin. There are five major toxins (Alpha, beta, epsilon, iota and enterotoxin). Alpha toxins are produced by all five types (types A–E) of <i>C. perfringens</i> . This toxin is linked to gas gangrene of humans and animals. Alpha toxin is a zinc-containing phospholipase C (PLC), and composed of 370 amino acid residues (MW:43kDa), with two structural domains: N-domain (1-250 amino acids, MW: 29kDa) and C-domain (251-370 amino acids, MW:15kDa).
Data Link	GenBank: M24904
Please note: All products are FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES. NOT FOR MILITARY USE.	

Data Images: 64-054 Anti-*Clostridium perfringens* α toxin (C-domain) antibody, mouse monoclonal (cp-01)

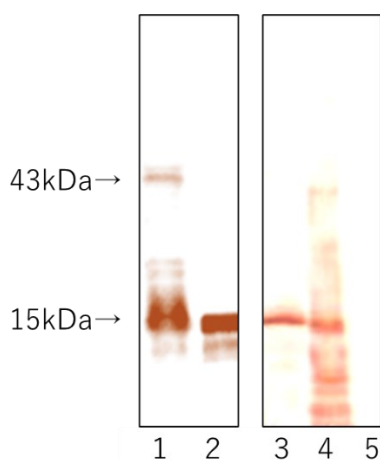


Fig.1. Western blotting (WB) of PLC from *C. perfringens* with cp-01 antibody.

Culture supernatant and crude extract of *C. perfringens* cells, and purified PLC (derived from *C. perfringens*, Sigma-Aldrich) were applied to WB: (1) PLC under non-reducing condition, (2) PLC under reducing condition, (3) culture supernatant of *C. perfringens*, (4) crude extract of *C. perfringens* cells and (5) crude extract of *Bacillus cereus* cells. The cp-01 antibody was used at 1/400 dilution. The HRP-conjugated goat anti-mouse IgG was used at 1/4,000 as the second antibody and visualized by DAB (3,3'-Diaminobenzidine). A protein band 15kDa in size corresponds to the expected size of the PLC C-domain of *C. perfringens*.

Table 1. Reactivity of cp-01 antibody with various food poisoning bacteria.

	ELISA	WB(Da)
<i>Clostridium perfringens</i> (ATCC13124)	+	15k
<i>Clostridium perfringens</i> (isolated strain)	+	15k
<i>Bacillus cereus</i> (NBRC15306)	—	—
<i>Stapylococcus aureus</i>	—	
<i>Campylobacter jejuni</i>	—	
<i>Vibrio parahaemolyticus</i>	—	
<i>Salmonella enteritidis</i>	—	
<i>Escherichia coli</i> (ETEC)	—	
<i>Escherichia coli</i> 0157:H7(EHEC)	—	
Purified α toxin (PLC)*	+	15k (43k)

*Phospholipase C from *Clostridium perfringens* (Sigma-Aldrich,Inc)

References This antibody has not yet been used in publication.

Related product:

64-050 Anti-*Clostridium perfringens* collagenase antibody, mouse monoclonal (cp-02)