Anti-*C. perfringens* collagenase antibody, mouse monoclonal (cp-02)

64-050 100 µg

Shipping and Storage: Ship at 4C and store at -20C. Do not freeze.

Immunogen: Culture supernatant of *Clostridium perfringens*

Specific Reactivity: Reacts with collagenases of *Clostridium perfringens* and *C. histolyticcum*

Applications:

1. Western blotting (1/500~1/1,000) 2. ELISA (assay dependent)

This antibody is useful for detecting food-poisoning *Clostridium* strains.

Background: *Clostridium perfringens* is one of the major causative agents of food poisoning. *C. perfringen*s produces various gelatinolytic enzymes with molecular masses ranging from approximately 120 to approximately 60 kDa. A gelatinolytic enzyme is present in the largest quantity in the culture supernatant, and this enzyme is purified as collagenase. The collagenase of *Clostridium histolyticum* (68 kDa).is the best studied and characterized.

Isotype: mouse IgM

Product: 1 mg/ml in PBS, 50% glycerol, filter sterilized.

Purity: Purefied using Ab-Capture for IgM (ProteNova, Japan)

Data Link: UniProtKB: P43153 ((COLA_CLOPE), Q46085 ((COLH_HATHI)

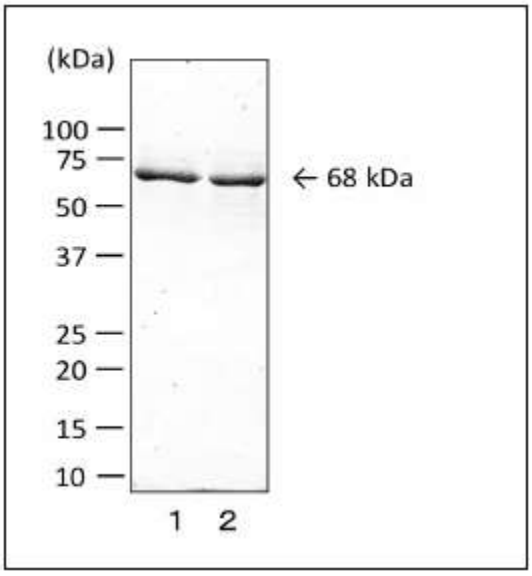

Fig.1. Detection of collagenase of *C. perfringens* by Western blotting with monoclonal antibody (MAb cp-02).

1. Purified collagenase of *C. histolyticum*
2. Culture supernatant of *C. perfringens*.

The 68 kDa band in lane 2 is collagenase of *C. perfringens*.

The primary antibody was used at 1/1,000 dilution.

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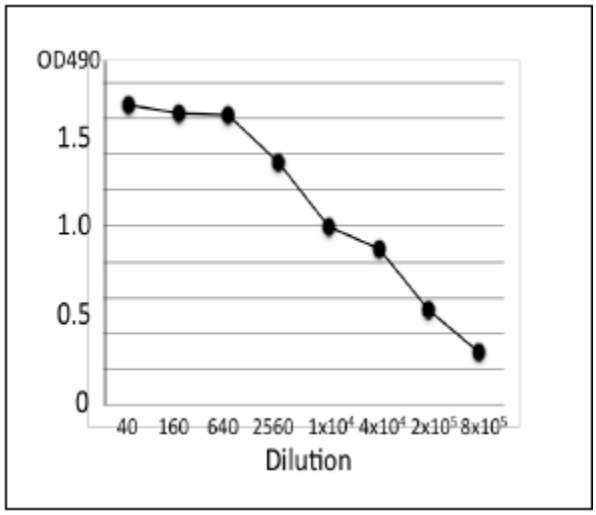

Fig.2. Titration of antibody reactivity of MAb (cp-02) by indirect ELISA using culture medium of *C. perfringens*.

The wells of plate were coated with culture medium of *C. perfingens* (100 µl, 1 µg/ml). After blocking with 5% skim milk, 100 µl of antibody at the indicated dilutions was added to the each well. HRP-conjugated goat anti-mouse IgG, IgM and IgA (100µl, x2000 dilution) was added. Color was developed with orthophenylenediamine as substrate. Optical densities (OD) measured at 490nm.

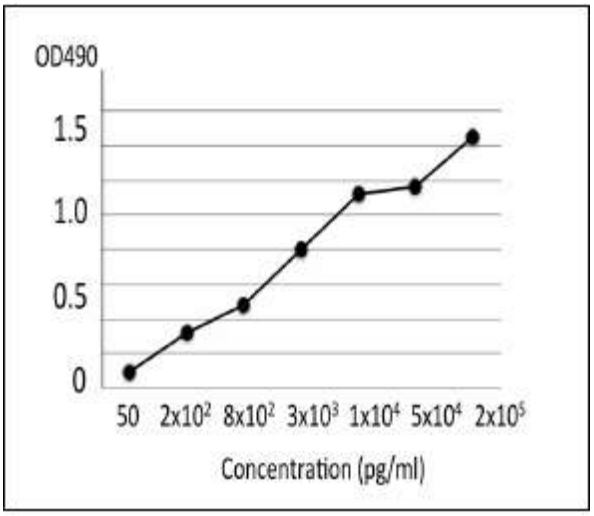

Fig.3. Titration of collagenase in culture medium of *C. perfringens* by indirect ELISA using MAb (cp-02).

ELISA plate is coated with indicated amounts of the culture medium of *C. perfringens* per well. MAb (cp-02) was used at 1/500 dilution. ELISA was performed as in Fig.2.

Tale 1. Immunological reactivity of MAb (cp-02) with various food poisoning bacteria

	ELISA	WB
Clostridium perfringens (ATCC13124)	+	68K
Bacillus cereus	−	
Staphylococcus aureus	−	
Campylobacter jejuni	−	
Salmonella Enteritidis	−	
Vibrio parahaemolyticus	−	
Escherichia coli (ETEC)	−	
E. coli 0157:H7 (EHEC)	−	
Purified Collagenase (from C.histolyticum)	+	68K

Reference: There has been no publication using this antibody.