

Anti-*Bacillus cereus* phospholipase C (PC-PLC) antibody, mouse monoclonal (bc-01)

64-060 100 µg

Ship at 4°C and store at -20°C. Do not freeze.

Immunogen: Culture supernatant of *B. cereus*

Specific Reactivity: Reacts with phosphatidylcholine phospholipase C (PC-PLC) of *Bacillus cereus*.

Applications:

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

This antibody is useful for detecting food poisoning *B. cereus*

Background: *Bacillus cereus* is one of the major causative agents of food poisoning and produces various toxins and enzymes. *B. cereus* produces two kinds of phospholipase C (PLC), phosphatidylcholine-PLC (PC-PLC) and phosphatidylinositol-PLC (PI-PLC) . The PC-PLC from *B. cereus*, a monomeric protein containing 245 amino-acid residues (28.5 kDa), This 245-aa Zn²⁺ metalloprotein provides the bacteria with a lecithinase activity but not a hemolytic activity.

Isotype: mouse IgM

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

Purity: Purified with Ab-Capture for IgM (ProteNova, Japan)

Data Link: UniProtKB [P09598](https://www.uniprot.org/entry/P09598) (PHLC_BACCE)

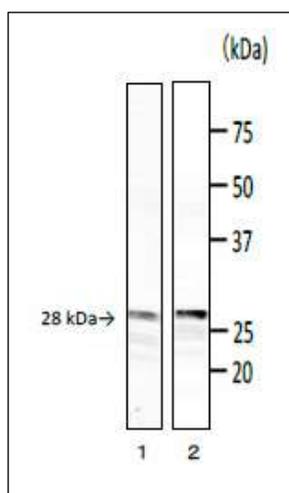


Fig.1. Detection of phospholipase C (PC-PLC) of *B. cereus* by Western blotting with monoclonal antibody (bc-01).

1. Culture medium of *B. cereus*
2. PC-PLC purified from *B. cereus*

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

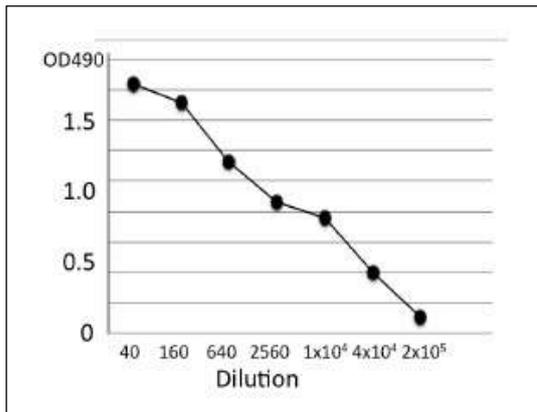


Fig.2. Titration of antibody reactivity of the MAb (bc-01) by indirect ELISA using crude extract of *B. cereus*

The wells of plate were coated with crude extract of *B. cereus* (100 μ l, 1 μ g/ml). After blocking with 5% skim milk, 100 μ l of antibody at the indicated dilutions was added to the each well. HRP-conjugated goat anti-mouse IgM (100 μ l, x 2000 dilution) was added.

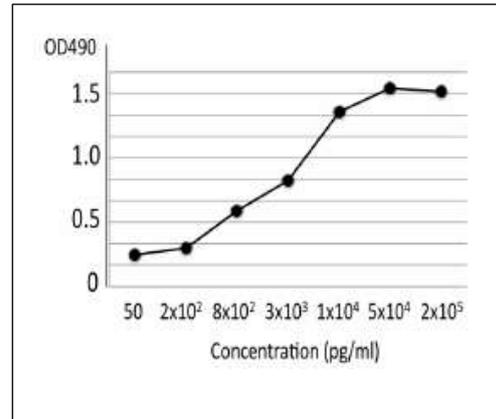


Fig.3. Titration of PLC in the extract of *B. cereus* cells by indirect ELISA using MAb (bc-01).

ELISA plate is coated with indicated amounts of the extract of *B. cereus* cells per well. MAb (bc-01) was used at 1/ 500 dilution. ELISA was performed

Table 1 Reactivities of MAb (bc-01) with various food poisoning bacteria

	ELISA	WB
<i>Bacillus cereus</i> (NBRC15306)	+	28K
Other 5 isolated strains	+	
<i>Bacillus subtilis</i>	—	
<i>Staphylococcus aureus</i>	—	
<i>Salmonella Enteritidis</i>	—	—
<i>Escherichia coli</i> (ETEC)	—	—
<i>E. coli</i> 0157:H7 (EHEC)	—	
Purified PLC (from <i>B.cereus</i>)	+	28K

PLC : Phospholipase C

MAb (bc-01) reacts with a standard strain of *B. cereus* (NBRC15306), 5 isolated strains and both PLC of *B. cereus* and α -toxin of *C. perfringens*. Antibody reacts with *C. perfringens*, but not with any other food poisoning bacteria. Protein bands, 28 kDa and 43kDa sizes correspond to the expected sizes of the *B. cereus*