Anti-*Staphylococcus aureus* Enterotoxin A/B antibody, mouse monoclonal (sa-01)

Product code	64-040
Size	100 µg
Storage	-20℃
Concentration	1.0 mg/ml
Buffer	PBS- with 50% glycerol
Purity	Purified IgG fraction with protein A from hybridoma cell culture medium.
Immunogen	Culture supernatant of *Stapylococcus aureus*
Isotype	Mouse IgG2a
Reactivity	Enterotoxin A and B of *Stapylococcus aureus.* Reactivity with other types of the enterotoxins has not been tested
Special notes	N/A
Application	1. Western blotting (1/500~1/1,000) 2. ELISA (assay dependent) 3. Immunochromatography (assay dependent) This antibody is used for detecting food-poisoning *S. aureus.*
Background	Over 20 serologically distinct staphylococcal enterotoxins (SE) have been described that include SEs A through V and toxic shock syndrome toxin-1 (TSST-1). SEA and SEB are the best characterized and are also regarded as super antigen. SEA, SED and SEE share 70–90% sequence homology, while only 40–60% with SEB, SEC and TSST-1. Their mature length is approximately 220–240 amino acids, depending on the toxin, and their molecular size is on average 27kD to 30kD and have significant sequence variability, but when folded have similar three-dimensional structures.
Data Link	UniProtKB: P0A0L2 (ETXA_STAAU), P01552 (ETXB_STAAU)

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

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Data Images: 64-040 Anti-*Staphylococcus aureus* Enterotoxin A/B antibody, mouse monoclonal (sa-01)

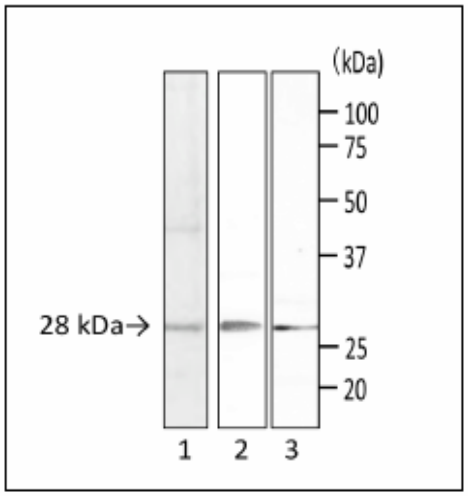

Fig.1. Detection of *S. aureus* enterotoxins by Western blotting with monoclonal antibody (MAb sa-01).

1. Culture medium of *S. aureus*
2. Purified *S. aureus* enterotoxin A (Sigma-Aldrich)
3. Purified *S. aureus* enterotoxin B (Sigma-Aldrich)

The molecular masses of enterotoxin A and B are 30 kDa and 29 kDa, respectively.

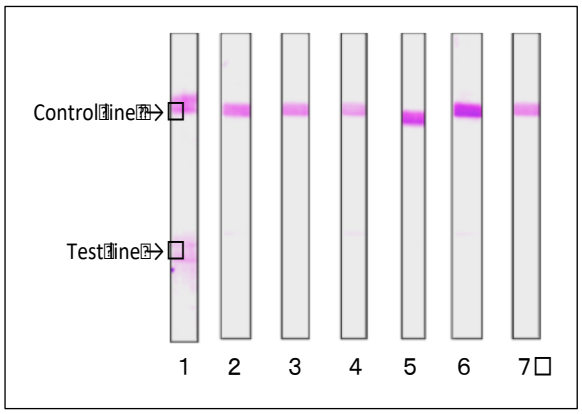

Fig 2. Reactivity of the MAb (sa-01) with various food poisoning bacteria in immunochromatographic strip test.

Mouse MAb (BioAcademia sa-02) was coated onto a specific area (test line) of a nitrocellulose membrane, while goat anti-mouse IgG was coated onto another specific area (control line) on the same membrane. Extract of each strain of food poisoning bacteria was mixed with the MAb (sa-01) conjugated with colloidal gold. The strip was soaked and reacted with the mixture fluid. (1) *S. aureus*, (2) *Escherichia coli* O157:H7, (3) *E. coli* K12, (4) *Salmonella Enteritidis,* (5) *Campylobacter jejuni*, (6) *Vibrio parahaemolyticus,* (7) PBS. MAb (sa-01) reacted with *S. aureus*, but not with other food poisoning bacteria.

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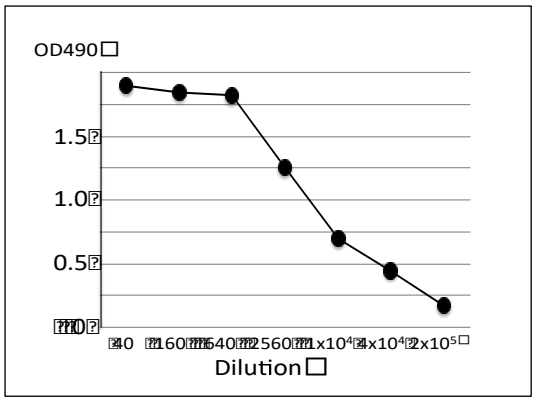

Fig.3. Titration of antibody reactivity of MAb (sa-01) by indirect ELISA using crude extract of *S. aureus*

The wells of plate were coated with crude extract of *S. aureus* (100 µl, 1 µg/ml). After blocking with 5% skim milk, 100 µl of antibody at the indicated dilution was added to the each well. HRP-conjugate goat anti-mouse IgG (100 µl、x2000 dilution) was added. Color was developed with orthophenylenediamine as substrate. Optical density (OD) measured at 490nm.

Table 1. Reactivity of MAb (sa-01) with various food poisoning bacteria.

	ELISA	WB
Staphylococcus aureus (NBRC15306)	+	28K
Other 5 isolated strains	+	
Campylobacter jejuni	—	—
Salmonella enteritidis	—	—
Escherichia coli	—	—
E. coli O157:H7	—	
Clostridium perfringens	—	
Bacillus cereus	—	—
S. aureus enterotoxin A (SEA)	+	28K
S. aureus enterotoxin B (SEB)	+	28K
S. aureus enterotoxin (Set A, B, C, D, E)	+	

SEA, SEB: Sigma-Aldrich. Inc.
Ridascreen set A, B, C, D, E positive contral (R-Biopharm AG)

Reference: There has been no publication using this antibody.

Please let us know when your research using this antibody is published. We will offer one vial of our antibody as compliment.

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