Technical Bulletin

Anti-Staphylococcus Aureus LTA Antibody, Mouse Monoclonal

Clone LT-43, purified from hybridoma cell culture

SAB4200883

Product Description

Monoclonal Anti-Staphylococcus aureus LTA antibody (mouse IgM isotype) is derived from the LT-43 hybridoma, produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with Staphylococcus aureus LTA (Cat. No. L2515) as immunogen. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents (Cat. No. ISO-2). The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti- Staphylococcus aureus lipoteichoic acid (LTA) antibody specifically recognizes LTA of Staphylococcus aureus and has no cross reactivity with Bacillus subtilis LTA and Enterococcus hirae LTA. The antibody may be used in various immunochemical techniques including Immunoblotting and ELISA.

Staphylococcus aureus is a Gram-positive bacterium, that causes disease in the human population including food poisoning and toxic shock syndrome.[1] *S. aureus* expresses several secreted virulence factors, such as various enzymes, cytotoxins, exotoxins, and exfoliative toxins.[1] Exotoxins include more than 20 serologically classified staphylococcal enterotoxins (SEs). The best characterized are the SEs A, B through V, and toxic shock syndrome toxin-1 (TSST-1). These enterotoxins are similar in activity, sequence, structure, and molecular mass (25-30 kDa).[1-3] SEA and SEB are known as superantigens due to their ability to bind class II MHC molecules on antigen presenting cells. This binding stimulates extensive T-cell activation followed by massive cytokine release leading to an acute toxic shock.[1-4] SEB is also classified as a category B select agent and is important toxicant in biodefense research.[5-9] SE proteins have a significant resistance to heat and acid, and are also resistant to gastrointestinal proteases including pepsin, trypsin, rennin, and papain. Thus, inactivating the *S. aureus* bacteria may not be sufficient to eliminate the risk of its superantigens from causing food poisoning.[1]

SEB contamination can be caused by both its ingestion (resulting with food poisoning) or by inhalation (resulting with respiratory symptoms of cough and dyspnea), therefore SEB detection is a major challenge in the food industry.[1,3,5-10]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

Unless otherwise stated in our catalog our products are intended for research use only and are not to be used for any other purpose, which includes but is not limited to, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses or any type of consumption or application to humans or animals.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.
Product Profile

Immunoblotting

A working concentration of 1-2 µg/mL is recommended using LTA from Staphylococcus aureus (Cat. No. L2515).

ELISA

A working concentration of 0.5-1.0 µg/mL is recommended using LTA from Staphylococcus aureus (Cat. No. L2515).

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

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