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Certificate of Analysis and Data Sheet

Mouse Anti-*S. aureus* PBP2a Antibody

Catalog No:	Isotype:	Species:	Accession No:
130-10096	IgG1 /4B10.B6	*S. aureus*	NP_359415.1

Description

Methicillin-resistant *Staphylococcus aureus* (MRSA) is a major pathogen responsible for serious hospital infections worldwide. These bacteria are resistant to all beta-lactam antibiotics due to the production of an additional penicillin binding protein, the PBP2a (about 75kDa) encoded by the *mecA* gene, which shows low affinity for this class of antibiotics. According to the resistant and sensitive ability of the bacteria to antibiotics, two main groups are classified: MRSA and MSSA (Methicillin-sensitive *Staphylococcus aureus).*

Applications

Summary of antibody applications and working conditions

Options / Functions	YES	NO	Not determined	Recommended Work dilution or concentration
ELISA	*			1 : 80,000
Western Blotting	*			1 : 1,000
Enzyme Immunoassay (EIA)			*	
Immunohistology - paraffin			*	
Immunohistology - resin			*	
Immunoprecipitation			*	
Flow Cytometry			*	
Neutralization			*	

Note: Other applications are not tested yet. Optimal dilutions should be determined by each laboratory for each application

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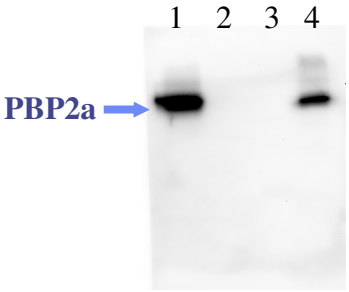

Western Blot: The membrane blot was probed with purified mouse anti-MRSA primary antibody (1:1,000), then with Anti-Mouse IgG secondary antibody conjugated to HRP (1:10,000). The detected protein was clearly visualized by chemiluminescence detection system.

Lane 1 and 4. Lysates from two selected MRSA isolated strains;
Lane 2-3. Lysates from two selected MSSA strains.

Preparation

Immunogen was PBP2a recombinant protein derived from MRSA bacteria. This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with PBP2a. The IgG fraction of tissue culture supernatant was purified by Protein G affinity chromatography.

Specificity

This antibody was selected for its ability to specifically detect PBP2a from MRSA. The antibody has ability to distinguish both MRSA and MSSA in tested assays; in Western Blot analysis, this antibody did not produce a band for any bacterial cell lysates from MSSA. This antibody showed no cross-reactivity with other tested bacterial proteins.

Reconstitution

Product is supplied as a powder obtained from lyophilization of purified antibody in PBS without preservatives. Reconstitute the antibody with sterile de-ionized water to a final concentration of 1 mg/ml.

Storage

Store at 4°C if intended for use within one month, otherwise, store at -20°C to -80°C. The lyophilized antibody is stable for at least 18 months after the date of receipt when stored at -20°C to -80°C. After reconstitution, it can also be aliquoted and stored frozen at -20°C to -80°C in a manual defrost freezer for 6 months without detectable loss of activity. Upon reconstitution, the antibody can also be stored for 30 days at 4°C. **Please avoid freeze-thaw cycles, as this will lower the activity of the antibody.**

Reference

Zinderman, C.; et al. "Community-Acquired Methicillin-Resistant Staphylococcus aureus Among Military Recruits". *Emerging Infect Dis*. 2004;10(5):941-4.

Bignardi GE, et al. Detection of the *mecA* gene and phenotypic detection of resistance in *Staphylococcus aureus* isolates with borderline or low level methicillin resistance. J Antimicrobiol Chemother. 1996;37:53–63.