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Certificate of Analysis and Data Sheet

Mouse anti-Methicillin-resistant *S. aureus* antibody

Catalog No: 130-00031	Isotype: Mouse IgG1	Clone: 20G10.H8	Species: <i>S. aureus</i>	Accession No: NP_359415.1
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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 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	*			1:1000-5000
Western Blotting	*			0.1-0.2 µg/ml (See Image below)
Enzyme Immunoassay(EIA)			*	
Immunohistology paraffin			*	
Immunohistology resin			*	
Immunoprecipitation	*			1:1000-2000
Flow Cytometry			*	
Neutralization			*	

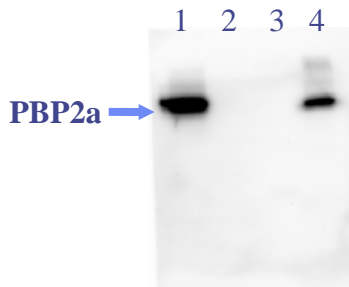
Note: Other applications are not tested yet. Optimal dilutions should be determined by each laboratory for each application

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



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Western Blot: The membrane blot was probed with purified Mouse Anti-MRSA primary antibody (0.2 µg/ml), 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 the Western Blot, 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.**

References

Zinderman, C.; et al. Community-Acquired Methicillin-Resistant *Staphylococcus aureus* Among Military Recruits. *Emerg 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.

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