



RayBiotech, Inc.

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Certificate of Analysis and Data Sheet

Mouse Anti-Methicillin-Resistant *S. aureus* Antibody

Catalog No: 130-00029	Isotype: Mouse IgM	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			*	
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

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



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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 IgM fraction of tissue culture supernatant was purified by 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 be aliquotted 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 1 month 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. *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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