



## RayBiotech, Inc.

3607 Parkway Lane, Suite 100  
Norcross, GA 30092  
Tel: 770-729-2992, 1-888-494-8555  
Fax: 770-206-2393  
Website: [www.raybiotech.com](http://www.raybiotech.com)  
Email: [info@raybiotech.com](mailto:info@raybiotech.com)

### Certificate of Analysis and Data Sheet

## Rabbit Anti-Methicillin-Resistant *S. aureus* Antibody

<b>Catalog No:</b> 130-10073	<b>Isotype:</b> Rabbit IgG	<b>Species:</b> <i>S. aureus</i>	<b>Accession No:</b> 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 75 kDa) 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

Table Summary of antibody applications and working conditions

Options Functions	YES	NO	Not determined	Recommended Work dilution or concentration
ELISA	*			1:40000 (detects $\geq 25$ ng/ml)
Western Blotting	*			1:1000
Enzyme Immunoassay (EIA)			*	
Immunohistology (paraffin)			*	
Immunohistology (resin)			*	
Immunoprecipitation			*	
Flow Cytometry			*	
Neutralization			*	

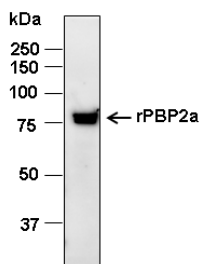
Note: Other applications are not tested yet. Optimal dilutions should be determined by each laboratory for each application

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



## RayBiotech, Inc.

3607 Parkway Lane, Suite 100  
Norcross, GA 30092  
Tel: 770-729-2992, 1-888-494-8555  
Fax: 770-206-2393  
Website: [www.raybiotech.com](http://www.raybiotech.com)  
Email: [info@raybiotech.com](mailto:info@raybiotech.com)



Western blot analysis of 100 ng rPBP2a using purified rabbit anti-PBP2a primary antibody (1:1,000 µg/ml). Then the blot was incubated with anti-rabbit HRP-conjugated IgG (1:10,000).

### Preparation

The immunogen was a synthetic peptide (PBP2a: aa 475~498: NH<sub>2</sub>-CGSKKFEKGMKKLGVGEDIP-SDYPF). This antibody was produced from a rabbit immunized with this peptide conjugated with KLH. The IgG fraction was purified from rabbit serum 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 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): 941-944.

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.

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