

Anti- β Lactamase

Monoclonal Antibody

Product Information

Product No.: 15720

Clone: 8A5.A10

Isotype: Mouse IgG1

Storage: -20° to -70°C

Product Description

Specificity:

Antibody clone 8A5.A10 detects beta Lactamase from *E. coli* samples and has been successfully used in ELISA and Western blot applications.

Background:

Beta-lactam antibiotics, like penicillins and cephalosporins, are among the most common medications doctors use to fight bacterial infections. They all share a crucial component: a central beta-lactam ring. This unique structure is what gives them their powerful ability to kill bacteria.

Unfortunately, bacteria are increasingly developing resistance to these vital drugs. This largely happens because microbes produce beta-lactamase enzymes. These enzymes work by breaking open the beta-lactam ring, which completely destroys the antibiotic's ability to fight off bacteria.

A significant concern is the rise of bacteria that produce TEM- or SHV-type beta-lactamases. These particular enzymes have evolved through small changes in their genetic code (called point mutations), allowing them to break down an even wider range of beta-lactam antibiotics. As a result, many Gram-negative bacteria that produce these beta-lactamases have become multi-drug resistant, making infections much harder to treat.

Known Reactivity Species:

E. coli

Format:

Purified

Immunogen:

5'-His-tagged *E. coli* 205 TEM-1 R+ beta-lactamase

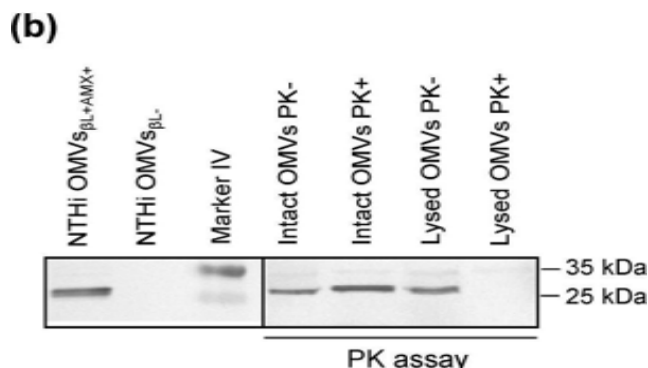
Formulation

Formulated in 0.015M potassium phosphate buffered saline (0.85%), pH 7.2 and contains 0.05% sodium azide.

Storage and Stability

Upon initial thawing, appropriately aliquot and store at -20-to -70°C. For long-term storage, keep at -70°C.

Avoid Repeated Freeze-Thaw Cycles



Product Preparation

This antibody is purified by a multi-step process including the use of protein A or G to assure extremely low levels of endotoxins, leachable protein A or aggregates.

Applications

Applications and Recommended Usage (Quality Tested By Leinco):

Immunoblotting: use at 10µg/ml. Predicted molecular weight ~29kDa

ELISA: use at 10-20µg/ml (optimized for immobilized beta-lactamase at 10µg/ml)

End users should determine optimal concentrations for their applications.

Country of Origin

USA

References

- 1) In Vivo Secretion of β -Lactamase-Carrying Outer Membrane Vesicles as a Mechanism of β -Lactam Therapy Failure. Membranes (Basel) (2021) [34832035]