



# $\beta$ lactamase (3E11.G3): sc-66061

## BACKGROUND

$\beta$ -lactam antibiotics constitute a broad class of antibiotics as well as the most widely used group of antibiotics available.  $\beta$  lactamases represent a heterogeneous group of enzymes produced by many types of bacteria. This enzyme makes the bacteria resistant to  $\beta$  lactam antibiotics, including penicillins and cephalosporins, which inhibit the synthesis of the peptidoglycan layer of bacterial cell walls.  $\beta$  lactamase catalyzes the opening and hydrolysis of the  $\beta$  lactam ring in the antibiotic's structure, thus deactivating the antibiotic's antibacterial properties. Four classes (A-D) of  $\beta$  lactamase are classified according to sequence, substrate specificity, and kinetic behavior. Classes A, C, and D work via a serine based mechanism, and class B (also referred to as metallo- $\beta$  lactamase) require zinc.

## REFERENCES

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## SOURCE

$\beta$  lactamase (3E11.G3) is a mouse monoclonal antibody raised against type IV  $\beta$ -lactamase of *Enterobacter cloacae* origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>3</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

$\beta$  lactamase (3E11.G3) is recommended for detection of type IV  $\beta$ -lactamase of *Enterobacter cloacae* origin by solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of  $\beta$  lactamase: 40 kDa.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.