

Product Specification Sheet

**Beta-Lactamase (EC.3.5.2.6/Cephalosporinase/TEM precursor) Antibodies**

□ Cat. # BLAC11-S	Rabbit Anti-Beta Lactamase (E. coli) antiserum	<b>SIZE:</b> 100 ul
□ Cat. # BLAC11-C	Recombinant Beta Lactamase protein control for Western blot	<b>SIZE:</b> 100 ul

Beta-lactamase is a type of enzyme (EC3.5.2.6) produced by some bacteria that is responsible for their resistance to beta-lactam antibiotics like penicillins, cephalosporins, cephamycins and carbapenems. These antibiotics have a common element in their molecular structure: a four-atom ring known as a beta-lactam. The lactamase enzyme breaks that ring open, deactivating the molecule's antibacterial properties. Beta-lactam antibiotics are typically used to treat a broad spectrum of Gram-positive bacteria, as well as a few Gram-negative bacteria. Beta-lactamases produced by Gram-negative organisms are usually secreted, especially when antibiotics are present in the environment.  $\beta$ -Lactamase, EC 3.5.2.6, Cephalosporinase.

**Source of Antigen and Antibodies**

<b>Antigen</b>	Beta-Lactamase Recombinant produced in E.Coli (>95%, 29 kda)
<b>Antibody host/type</b>	Rabbit polyclonal unpurified antiserum, <b>Cat # BLAC11-S</b> supplied in PBS, pH 7.4, 0.1% azide in liquid or powder
<b>Secondary Ab</b>	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
<b>Negative Control Ab</b>	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

**BLAC11-C, Western blot control**

Recombinant Beta-lactamase was expressed in E. coli and purified (>95%, 29 kda). For Western blot +ve control (**Cat # BLAC11-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **BLAC11-C** for good visibility with antibody **Cat # BLAC11-S**. Store at -20°C in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **BLAC11-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. It should not be used as quantitative standards as this is only meant to serve as mol. wt marker for the light chain. Do not freeze, thaw, or heat repeatedly.

**Form & Storage**

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4°C.

**Long-term:** at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20°C or below.

**Shipping:** 4°C for solutions and room temp for powder.

**Recommended Usage**

**Western Blotting** (1:500:2000) using ECL. Beta-lactamase is ~29 Kda/

**ELISA** (0.1-1 ug/ml as detecting antibody. Suitable as capture antibody.

**Histochemistry:** not tested. We recommend the use of 2-10 ug/ml of antibody in paraformaldehyde-fixed, paraffin embedded sections.

**Specificity & Cross-reactivity**

BLAC11-S reacts with native and recombinant beta-lactamase proteins in ELISA and Western. Purified recombinant beta-lactamase (#RP-431) or western controls (#BLAC11-S) can be used for control studies.

**References:** Abraham EP (1940) Nature 46, 837; Bush K (1995) Antimicrob Agents Chemother.;39: 1211-33; Bradford PA (2001) Clin Microbiol Rev. 48:933-51;

\*This product is for In vitro research use only.

**Related material available from ADI**

Catalog#	ProdDescription
AD-159-B	metallo-b-lactamase inhibitor, DNA aptamer, Biotinylated
AD-159-F	metallo-b-lactamase inhibitor, DNA aptamer, FITC labelled
AD-159-U	metallo-b-lactamase inhibitor, DNA aptamer, unlabeled
BLAC11-S	Anti-Beta Lactamase (E. coli) antiserum
RP-1621	Recombinant purified Beta Lactamase (E. Coli, his-tag)
RP-431	Recombinant (E.Coli) Beta Lactamase
BLAC11-C	Recombinant Beta Lactamase protein control for Western blot
BLAC11-S	140922A