

E. coli Beta Lactamase - Purified

Catalog No.: AR10478PU-L

Quantity: 50 mg

Concentration: 1.0 mg/ml (prior to lyophil.)

Background: 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.

Uniprot ID: [P62593](#)

NCBI: [NP_943295.1](#)

GeneID: [10076131](#)

Species: E. coli

Source: E. coli

Format: **State:** Sterile Filtered White lyophilized (freeze-dried) powder
Purity: >90.0% as determined by both RP-HPLC and SDS-PAGE analysis.

Purification Method: Proprietary chromatographic techniques.

Buffer System: Lyophilized from a concentrated (1 mg/ml) solution in water containing 20mM Phosphate buffer pH 7

Reconstitution: Restore in sterile 18MΩ·cm⁻¹ H₂O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Description: Recombinant Beta-Lactamase produced in *E.coli* is a single, non-glycosylated polypeptide chain containing 263 amino acids.

AA Sequence:

MHPETLVK VKDAEDQLGA RVGYIELDLN SGKILESRFP EERFPMMSTF KVLCCGAVLS RVDAGQEQLG
RRIHYSQNDL VEYSPVTEKH LTDGMTVRELCSAAITMSDN TAANLLTTI GGPKELTAFL HNMGDHVTRL
DRWEPELNEA IPNDRDTTM PAAMATTLRK LLTGELLTLA SRQLIDWME ADKVAGPLLR SALPAGWFIA
DKSGAGERGS RGIIAALGPD GKPSRIVVIY TTGSQATMDE RNRQIAEIGA SLIKHW

Specific Activity: 1,500IU/mg.

Unit Definition: One unit will hydrolyze 1.0 µmole of indicated substrate per min at pH 7.0 at 25°C. The International Unit (using Benzylpenicillin as substrate) is approximately equal to 600 Levy or 75 Pollock units.

Molecular weight: 29 kDa

Storage:

Prior to reconstitution store at 2-8°C for one month or desiccated below -18°C.
Following reconstitution store undiluted at 2-8°C for one month
or (in aliquots) at -20°C for longer.
For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.