



Beta Lactamase, *E. coli* Recombinant Protein

Product Data Sheet

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|------------------|---------|---------|---------|
| Cat. No.: | A435101 | A435110 | A435150 |
| Size: | 1 mg | 10 mg | 50 mg |

Description

Beta Lactamase, E. coli Recombinant Protein is a single, non-glycosylated polypeptide chain that contains 264 amino acids and has a molecular mass of approximately 28.9 kDa. Beta Lactamase is purified by proprietary chromatographic techniques.

Summary

Beta-lactamase is a type of enzyme (EC 3.5.2.6) 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.

Other names

beta-lactamase, b-lactamase, β -Lactamase, LACTB, TEM-1

Type

Recombinant protein

Source

E. coli

Amino Acid Sequence

MHPETLVK VKDAEDQLGA RVGYIELDLN SGKILESFRP EERFPMMSTF KVLCCGAVLS RVDAGQEQLG
RRIHYSQNDL VEYSPVTEKH LTDGMTVREL CSAAITMSDN TAANLLTTI GGPKELTAFL HNMGDHVTRL
DRWEPELNEA IPNDERDTTM PAAMATTLRK LLTGELLTLA SRQQLIDWME ADKVAGPLLR SALPAGWFIA
DKSGAGERGS RGIIAALGPD GKPSRIVVIY TTGSQATMDE RNRQIAEIGA SLIKHW.

update.: 2023.12

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Purity

Greater than 95.0% as determined by SDS-PAGE.

Biological Activity

One unit will hydrolyze 1.0 μ mole of benzyl penicillin at pH 7.0 at 25° C, in presence of EDTA.

Formulation

Sterile-filtered, white lyophilized (freeze-dried) powder. Lyophilized from a concentrated solution in 100 mM Tris, pH 7.0.

Reconstitution

It is recommended to reconstitute the lyophilized Beta Lactamase in sterile 18M Ω -cm H₂O at a concentration of 100 μ g/ml, which can then be further diluted to other aqueous solutions. The Beta Lactamase should be used in pH 7.0- 8.0 and in temperature not higher than 45° C.

Shipping

Ships at ambient temperature. Upon receipt, store the product at the temperature recommended below.

Storage/Expiration

Lyophilized Beta Lactamase, although stable at room temperature for 3 weeks, should be stored desiccated below -18° C. Upon reconstitution, Beta Lactamase Recombinant should be stored at 4° C between 2-7 days and for future use below -18° C. For long term storage it is recommended to add a carrier protein (0.1% [HSA or BSA](#)). **Please prevent freeze-thaw cycles.**

Usage

This product is intended for **Laboratory Research Use Only**. Not for use in diagnostic or therapeutic procedures. This product may not be used as a pharmaceutical or veterinary drug, agricultural product, or food additive.

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