

Recombinant Beta-lactamase TEM-1

Catalog No: #AP60430

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Description

Product Name	Recombinant Beta-lactamase TEM-1
Host Species	Escherichia coli.
Purification	> 95 % by SDS-PAGE.
Calculated MW	Approximately 28.9 kDa, a single non-glycosylated polypeptide chain containing 264 amino acids.
Target Sequence	MHPETLVKVK DAEDQLGARV GYIELDLNSG KILESFRPEE RFPMMSTFKV LLCGAVLSRV DAGQEQLGRR IHYSQNDLVE YSPVTEKHLT DGMTVRELCS AAITMSDNA ANLLTTIGG PKELTAFLHN MGDHVTRLDR WEPELNEAIP NDERDTTPA AMATTLRKL TGELLTLASR QQLIDWMEAD KVAGPLLRSA LPAGWFIADK SGAGERGSRG IIAALGPDGK PSRIVVIYTT GSQATMDERN RQIAEIGASL IKHW
Formulation	Lyophilized from a 0.2 µm filtered concentrated solution in 100 mM Tris, pH 7.0.
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles.- 12 months from date of receipt, -20 to -70 °C as supplied.- 1 month, 2 to 8 °C under sterile conditions after reconstitution.- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

Background

Beta-lactamases are enzymes produced by some bacteria and are responsible for their resistance to beta-lactam antibiotics like penicillins, cephamycins, and carbapenems. The lactamase enzyme breaks the β -lactam ring open and deactivates the molecule's antibacterial properties because of a common element in these antibiotics molecular structure: a four-atom ring known as a beta-lactam. TEM-1 is the most commonly-encountered beta-lactamase in gram-negative bacteria. Up to 90 % of ampicillin resistance in *E. coli* is due to the production of TEM-1. Also responsible for the ampicillin and penicillin resistance that is seen in *H. influenzae* and *N. gonorrhoeae* in increasing numbers. Based upon different combinations of changes, currently 140 TEM-type enzymes have been described. Recombinant beta-lactamase TEM-1 contains 264 amino acids residues.

Note: This product is for in vitro research use only