

Beta Lactamase from E.coli, Recombinant

Cat. No. NATE-1886

Lot. No. (See product label)

Introduction

Description 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.

Synonyms b-Lactamase; EC 3.5.2.6; TEM precursor; β -lactamase

Product Information

Species E. coli

Source E. coli

Form Lyophilized from a concentrated (1mg/ml) solution in water containing 20mM Phosphate buffer pH-7.

EC Number EC 3.5.2.6

Molecular Weight 29 kDa

Purity Greater than 90.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

Activity 700IU/mg

Solubility 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.

Unit Definition One unit will hydrolyze 1.0 μ mole 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.

Storage and Shipping Information

Stability 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.