

## 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;  $\beta$ -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 $\Omega$ -cm H<sub>2</sub>O at a concentration of 100  $\mu$ 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  $\mu$ 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.