



RayBiotech, Inc.

3607 Parkway Lane suite 200
Norcross, GA 30092
Tel: 770-729-2992, 1-888-494-8555
Fax: 770-206-2393
Website: www.raybiotech.com
Email: info@raybiotech.com

Certificate of Analysis and Data Sheet Recombinant Beta Lactamase

Catalog No.
228-11458

Source:
Escherichia Coli.

Synonyms:

β -Lactamase, EC 3.5.2.6, Cephalosporinase.

Introduction:

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.

Description:

Beta-Lactamase Recombinant produced in E. Coli is a single, non-glycosylated polypeptide chain containing 263 amino acids and having a molecular mass of 29 kDa.
Beta Lactamase is purified by proprietary chromatographic techniques.

Source:

Escherichia Coli.

Physical Appearance:

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation:

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

Solubility:

It is recommended to reconstitute the lyophilized Beta Lactamase in sterile 18M Ω -cm H₂O not less than 100 μ g/ml, which can then be further diluted to other aqueous solutions.

Purity:

Greater than 90.0% as determined by:

- (a) Analysis by RP-HPLC.
- (b) Analysis by SDS-PAGE.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**



RayBiotech, Inc.

3607 Parkway Lane suite 200
Norcross, GA 30092
Tel: 770-729-2992, 1-888-494-8555
Fax: 770-206-2393
Website: www.raybiotech.com
Email: info@raybiotech.com

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.

Amino acid sequence:

MHPETLVK VKDAEDQLGA RVGYIELDLN SGKILESFRP EERFPMMSTF KVLICGAVLS
RVDAGQEQLG RRIHYSQNDL VEYSPVTEKH LTDGMTVRELCSAAITMSDN TAANLLLTII
GGPKELTAFL HNMGDHVTRL DRWEPELNEA IPNDERDTTM PAAMATTLRK LLTGELLTLA
SRQQLIDWME ADKVAGPLLR SALPAGWFIA DKSGAGERGS RGIIAALGPD GKPSRIVVIY
TTGSQATMDE RNRQIAEIGA SLIKHW.

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.

Specific Activity:

1,500IU/mg.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**