Penicillinase from *Bacillus cereus*

Catalog Number P0389
Storage Temperature 2–8 °C

CAS RN 9073-60-3
EC 3.5.2.6

Synonyms: Cephalosporinase, β-Lactamase II, β-Lactamase I, Penicillin amido-β-lactam hydrolase

Product Description
Penicillinases and cephalosporinases are defined as a group of enzymes with varying specificity for hydrolysis of β-lactam compounds. Penicillinase is a mixture of two types of β-lactamas, β-lactamase I and II. Both enzymes are described as metalloenzymes or serine-enzymes. Penicillinase from *Bacillus cereus* is a constitutive periplasmic enzyme with an observed K_M of 60 μM (benzylpenicillin) and molecular mass of 28 kDa.

The product is supplied as a lyophilized powder containing ~10% protein with phosphate and citrate buffer salts.

Specific activity:
1,500–3,000 units/mg protein (benzylpenicillin)

Unit definition: One unit will hydrolyze 1.0 μmole of benzylpenicillin per minute at pH 7.0 at 25 °C.

The activity of the enzyme is measured in International Units (I.U.) using benzylpenicillin as the substrate. One International Unit (I.U.) is equivalent to 600 Levy units, 75 Pollock units, or ~70,000 kinetic Kersey units. One International Unit (I.U.) equals 1 Sigma unit.

Precautions and Disclaimer
This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions
The product is soluble (10 mg/ml) in 0.1 M Tris HCl, pH 7.0, containing 0.1% BSA. The solution can be filtered through a 0.2 μm, low protein-binding membrane.

Storage/Stability
It is recommended to store the product desiccated at 2–8 °C. The product as supplied is stable for 2 years when stored properly. The product is stable in solution for at least three weeks at 2–8 °C.

References

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