Creative Enzymes®

Native Escherichia coli Penicillin Amidase

Cat. No. NATE-0541

Lot. No. (See product label)

Introduction

Description The biosynthesis of Penicillin amidase in E. coli by hydrophobic protein chromatography is an inducible reaction which is regulated by metabolized carbon source (e.g. polyols, carboxylic acid etc.). It is also influenced by catabolite repression. It catalyzes the formation of amide bonds through an acyl-enzyme intermediate.

Applications Penicillin amidase was used to study its effect in release of fatty acid and HSL (homoserine lactone) from AHLs (N-acylhomoserine lactones) in degradation of antibiotics. It was used as positive control for assaying penicillin G acylase activity in the study of functional analysis of bile salt hydrolase and penicillin acylase family members in Lactobacillus sp. Penicillin amidase may be used for synthesis of 6-aminopenicillanic acid from penicillin-G and for the industrial production of β-lactam antibiotics.

Synonyms penicillin amidase; penicillin acylase; benzylpenicillin acylase; novozym 217; semacylase; α-acylamino-β-lactam acylhydrolase; ampicillin acylase; EC 3.5.1.11; 9014-06-6

Product Information

Source Escherichia coli

Form Type II, ammonium sulfate suspension, Suspension in 0.1 M phosphate, pH 7.5 and 3 M ammonium sulfate.

EC Number EC 3.5.1.11

CAS No. 9014-06-6

Molecular Weight Mr ~70 kDa

Activity Type I, 5-10 units/mg protein; Type II, > 10 units/mg protein (E1%/280).

Unit Definition 1 U corresponds to the amount of enzyme which hydrolyzes 1 μmol benzylpenicillin per minute at pH 7.6 and 37°C

Storage and Shipping Information

Storage 2-8°C