Creative Enzymes®

Native Porcine Acylase I

Cat. No. NATE-0031

Lot. No. (See product label)

Introduction

Description	In enzymology, an aminoacylase (EC 3.5.1.14) is an enzyme that catalyzes the chemical reaction:N-acyl-L-amino acid + H2O↔ carboxylate + L-amino acid. Thus, the two substRates of this enzyme are N-acyl-L-amino acid and H2O, whereas its two products are carboxylate and L-amino acid. This enzyme belongs to the family of hydrolases, those acting on carbon-nitrogen bonds other than peptide bonds, specifically in linear amides. This enzyme participates in urea cycle and metabolism of amino groups.
Applications	Acylase I from porcine kidney has been used to study the acylase I-catalyzed deacetylation of various S-alkyl-N-acetyl-L-cysteines and their carbon and oxygen analogues. Acylase I may be useful to catalyze N-acetyl amino acids to enantiomerically pure L-amino acids.
Synonyms	aminoacylase 1; aminoacylase I; dehydropeptidase II; histozyme; hippuricase; benzamidase; acylase I; hippurase; amido acid deacylase; L-aminoacylase; acylase; aminoacylase; L-amino-acid acylase; α-N-acylaminoacid hydrolase; long acyl amidoacylase; short acyl amidoacylase; ACY1 (gene name); N-acyl-L-amino-acid amidohydrolase; EC 3.5.1.14; 9012-37-7

Product Information

Species	Porcine
Source	Porcine kidney
Form	lyophilized powder.
EC Number	EC 3.5.1.14
CAS No.	9012-37-7
Activity	> 2,000 units/mg protein; 500-1,500 units/mg protein
Pathway	2-Oxocarboxylic acid metabolism, organism-specific biosystem; Aflatoxin activation and detoxification, organism-specific biosystem; Biological oxidations, organism-specific biosystem
Function	aminoacylase activity; metal ion binding; metallopeptidase activity
Unit Definition	One unit will hydrolyze 1.0 µmole of N-acetyl-L-methionine per hr at pH 7.0 at 25°C.

Storage and Shipping Information

Storage	−20°C