Creative Enzymes®

N-carbamoyl-L-amino-acid hydrolase

Cat. No. EXWM-4478

Lot. No. (See product label)

Introduction

Description	This enzyme, along with EC 3.5.1.77 (N-carbamoyl-D-amino-acid hydrolase), EC 5.1.99.5 (hydantoin racemase) and hydantoinase, forms part of the reaction cascade known as the "hydantoinase process", which allows the total conversion of D,L-5-monosubstituted hydantoins into optically pure D- or L-amino acids. The enzyme from Alcaligenes xylosoxidans has broad specificity for carbamoyl-L-amino acids, although it is inactive on the carbamoyl derivatives of glutamate, aspartate, arginine, tyrosine or tryptophan. The enzyme from Sinorhizobium meliloti requires a divalent cation for activity and can hydrolyse N-carbamoyl-L-tryptophan as well as N-carbamoyl L-amino acids with aliphatic substituents. The enzymeis inactive on derivatives of D-amino acids. In addition to N-carbamoyl L-amino acids, the enzyme can also hydrolyse formyl and acetyl derivatives to varying degrees.
Synonyms	N-carbamyl L-amino acid amidohydrolase; N-carbamoyl-L-amino acid amidohydrolase; L-N-carbamoylase; N-carbamoylase (ambiguous)

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 3.5.1.87
Reaction	an N-carbamoyl-L-2-amino acid (a 2-ureido carboxylate) + H2O = an L-2-amino acid + NH3 + CO2
Notes	This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

Storage and Shipping Information

Storage	Store it at +4 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.