

## 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 enzyme is 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) + H<sub>2</sub>O = an L-2-amino acid + NH<sub>3</sub> + CO<sub>2</sub>

#### 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 °C for short term. For long term storage, store it at -20 °C~-80 °C.