

## Native Microorganism Creatine Amidinohydrolase

Cat. No. DIA-185

Lot. No. (See product label)

### Introduction

#### Description

Creatine Amidinohydrolase catalyzes the hydrolytic reaction converting creatine to sarcosine and urea. The enzyme is purified from a microorganism. The molecular weight of the enzyme is approximately 67,000. The enzyme is useful for the enzymatic assay of creatine and creatinine when coupled with other related enzymes. creatine + H<sub>2</sub>O → sarcosine + urea

#### Applications

This enzyme is useful for enzymatic determination of creatinine when coupled with creatinine amidohydrolase, sarcosine dehydrogenase or sarcosine oxidase and formaldehyde dehydrogenase in clinical analysis.

#### Synonyms

Creatine Amidinohydrolase; Creatinase; EC 3.5.3.3

### Product Information

#### Source

Microorganism

#### Appearance

White amorphous powder, lyophilized

#### Form

Freeze dried powder

#### EC Number

EC 3.5.3.3

#### CAS No.

37340-58-2

#### Molecular Weight

approx. 67 kDa (by gel filtration)

#### Activity

Gradell 4.0 U/mg-solid or more

#### Contaminants

NADH oxidase < 5.0×10<sup>-2</sup>%; Catalase < 2.0%

#### Isoelectric point

4.5±0.1

#### pH Stability

pH 4.0-10.0 (25°C, 20hr)

#### Optimum pH

6.5-7.5

#### Thermal stability

below 50°C (pH 7.5, 30min)

#### Optimum temperature

40–50°C

#### Michaelis Constant

4.5×10<sup>-3</sup> M (Creatine)

#### Structure

2 subunits per mol of enzyme

#### Inhibitors

Hg<sup>++</sup>, Cu<sup>++</sup>, Ag<sup>+</sup>, SH reagent (NEM), PCMB

#### Stabilizers

Sugars, EDTA

### Storage and Shipping Information

#### Stability

Stable at -20°C for at least one year