

Creatininase amidohydrolase

Cat. No. CAGZ-0001

Lot. No. (See product label)

Introduction

Description	Creatininase amidohydrolase is a microbial hydrolase that converts creatinine to creatine by cleaving a carbon-nitrogen bond other than a peptide bond.
Applications	Biochemical research and enzyme-based creatinine analysis.
Synonyms	Creatininase; Creatinine amidohydrolase; CAH

Product Information

Species	Pseudomonas putida
Source	Microbial enzyme from Pseudomonas putida
Appearance	White to off-white solid
Form	Solid
EC Number	3.5.2.10
CAS No.	9025-13-2
Molecular Weight	29 kDa (SDS-PAGE)
Activity	≥400 U/mg
Isoelectric point	5.3
pH Stability	pH 5.5-10.0 at 25°C for 16 h
Optimum pH	7.0-8.0
Thermal stability	Stable below 65°C at pH 8.0 for 30 min
Optimum temperature	65°C
Michaelis Constant	K _m : 5.0 × 10 ⁻² M (creatinine); 8.0 × 10 ⁻² M (creatine)
Structure	Homohexameric enzyme
Specificity	Creatinine
Inhibitors	Hg ²⁺ , Cu ²⁺ , Fe ³⁺
Function	Catalyzes hydrolysis of creatinine to creatine.
Solubility	H ₂ O: 50 mg/mL; ultrasonication required
Substrates	Creatinine
Reaction	Creatinine + H ₂ O → creatine
Notes	Creatine is also reported as a substrate for the reverse reaction under the stated kinetic characterization.
Usage	For biochemical studies and the development of enzyme-based creatinine assay

Usage

For biochemical studies and the development of enzyme based creatinine assay systems.

Usage and Packaging**Package**

1 KU

Preparation Instructions

Dissolve in pure water at a concentration below 50 mg/mL, or use an appropriate buffer for the intended experiment. Ultrasonication may be required when preparing a 50 mg/mL aqueous solution.