Creative Enzymes®

Native Microorganism Creatine Amidinohydrolase

Cat. No. DIA-141

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 + H2O → sarcosine + urea
Applications	This enzyme is useful for enzymatic determination of creatine and creatinine when coupled with creatinine amidohydrolase, sarcosine oxidase, and formaldehyde dehydrogenase in clinical analysis.
Synonyms	Creatine amidohydrolase; Creatinase; EC 3.5.3.3

Product Information

Source	Microorganism
Appearance	White amorphous powder, lyophilized
EC Number	EC 3.5.3.3
CAS No.	37340-58-2
Molecular Weight	approx. 67,000 (by gel filtration)
Activity	GradeⅡ 4.0U/mg-solid or more
Contaminants	NADH oxidase <5.0×10^{-2}%; 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^{-3} M (Creatine)
Structure	2 subunits per mol of enzyme
Inhibitors	Hg^{++}, Cu^{++}, Ag^{+}, SH reagent (NEM), PCMB
Stabilizers	Sugars, EDTA

Storage and Shipping Information

Stability	Stable at -20°C for at least one year