Creative Enzymes®

Creatinase from E. coli, Recombinant

Cat. No. NATE-1241

Lot. No. (See product label)

Introduction

Description	In enzymology, a creatinase (EC 3.5.3.3) is an enzyme that catalyzes the chemical reaction:creatine + H2O↔ sarcosine + urea. Thus, the two substrates of this enzyme are creatine and H2O, whereas its two products are sarcosine and urea. This enzyme belongs to the family of hydrolases, those acting on carbon-nitrogen bonds other than peptide bonds, specifically in linear amidines. Creatinase accelerates the conversion reaction of creatine and water molecule to sarcosine and urea. It always acts in homodimer state and is induced by choline chloride.
Synonyms	Creatine amidohydrolase; Creatinase; EC 3.5.3.3

Product Information

Species	E. coli
Source	E. coli
Appearance	White lyophilizate
EC Number	EC 3.5.3.3
CAS No.	37340-58-2
Molecular Weight	ca. 80 kDa
Activity	≥ 15 U/mg
Contaminants	catalase < 0.5%
pH Stability	4.0–11.0
Optimum pH	7.0–9.0
Thermal stability	below 53°C
Optimum temperature	45°C
Michaelis Constant	8.6 x 10^-3 M (creatine)
Structure	2 subunits of 48 kDa (SDS-PAGE)
Inhibitors	Hg2+
Stabilizers	Sucrose
Unit Definition	One unit (U) is defined as the amount of enzyme which produces 1 µmol of urea per min at 37°C and pH 7.7.

Storage and Shipping Information

Storage	at -20°C