Creative Enzymes
Diagnostic Enzymes

Creatinase from E. coli, Recombinant

Product Information

Cat#	NATE-1241
Abbr	Creatinase, Recombinant (E. coli)
Similar	Creatinase
Species	E. coli
Source	E. coli
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.
Appearance	White lyophilizate
Enzyme Commission Number	EC 3.5.3.3
Activity	> 15 U/mg
CAS No.	37340-58-2
Contaminants	catalase < 0.5%
Molecular Weight	ca. 80 kDa
pH Stability	4.0–11.0
Michaelis Constant	8.6 x 10^-3 M (creatine)
Structure	2 subunits of 48 kDa (SDS-PAGE)
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.

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Optimum pH	7.0–9.0
Optimum temperature	45°C
Thermal stability	below 53°C
Storage	at -20°C
Stabilizers	Sucrose
Inhibitors	Hg2+
Synonyms	Creatine amidohydrolase; Creatinase; EC 3.5.3.3

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