

## Creatinase from E. coli, Recombinant

### Product Information

<b>Cat#</b>	NATE-1241
<b>Abbr</b>	Creatinase, Recombinant (E. coli)
<b>Similar</b>	Creatinase
<b>Species</b>	E. coli
<b>Source</b>	E. coli
<b>Description</b>	In enzymology, a creatinase (EC 3.5.3.3) is an enzyme that catalyzes the chemical reaction: creatine + H <sub>2</sub> O ↔ sarcosine + urea. Thus, the two substrates of this enzyme are creatine and H <sub>2</sub> O, 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.
<b>Appearance</b>	White lyophilizate
<b>Enzyme Commission Number</b>	EC 3.5.3.3
<b>Activity</b>	> 15 U/mg
<b>CAS No.</b>	37340-58-2
<b>Contaminants</b>	catalase < 0.5%
<b>Molecular Weight</b>	ca. 80 kDa
<b>pH Stability</b>	4.0–11.0
<b>Michaelis Constant</b>	8.6 x 10 <sup>-3</sup> M (creatine)
<b>Structure</b>	2 subunits of 48 kDa (SDS-PAGE)
<b>Unit Definition</b>	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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<b>Optimum pH</b>	7.0–9.0
<b>Optimum temperature</b>	45°C
<b>Thermal stability</b>	below 53°C
<b>Storage</b>	at -20°C
<b>Stabilizers</b>	Sucrose
<b>Inhibitors</b>	Hg <sup>2+</sup>
<b>Synonyms</b>	Creatine amidohydrolase; Creatinase; EC 3.5.3.3

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