Creative Enzymes®

N-Methylhydantoinase (ATP-hydrolyzing) from Arthrobacter sp., Recombinant

Cat. No. NATE-0904

Lot. No. (See product label)

Introduction

Description In enzymology, a N-methylhydantoinase (ATP-hydrolysing) is an enzyme that catalyzes the chemical reaction: ATP + N-methylimidazolidine-2,4-dione + 2 H2O rightleftharpoons ADP + phosphate + N-carbamoylsarcosine. The 3 substrates of this enzyme are ATP, N-methylimidazolidine-2,4-dione, and H2O, whereas its 3 products are ADP, phosphate, and N-carbamoylsarcosine. This enzyme belongs to the family of hydrolases, those acting on carbon-nitrogen bonds other than peptide bonds, specifically in cyclic amides. This enzyme participates in arginine, creatinine, and proline metabolism.

Applications Use N-Methylhydantoinase (ATP-hydrolyzing) in diagnostic tests for the determination of creatinine in combination with Creatinine Deaminase, N-Carbamoylsarcosine Amidase and Sarcosine Oxidase.

Synonyms N-methylimidazolidine-2,4-dione amidohydrolase (ATP-hydrolysing); N-methylhydantoin amidohydrolase; methylhydantoin amidase; N-methylhydantoin hydrolase; N-methylhydantoinase

Product Information

Species Arthrobacter sp.

Source E. coli

Appearance White lyophilizate

Activity 0.6-1.0 U/ mg

Contaminants Creatinase: <0.013 Creatininase: <0.01 Catalase: <100 Uricase: <0.01

pH Stability 7.8-8.8

Storage and Shipping Information

Stability At -15 to -25°C within specification range for 12 months. Store dry. Protect from light.