Creative Enzymes®

Native Lactobacillus delbrückii D-Lactate Dehydrogenase, Grade II

Cat. No. NATE-0977

Lot. No. (See product label)

Introduction

Description	In enzymology, a D-lactate dehydrogenase is an enzyme that catalyzes the chemical reaction: (D)-lactate + 2 ferricytochrome c↔ pyruvate + 2 ferrocytochrome c. Thus, the two substrates of this enzyme are (D)-lactate and ferricytochrome c, whereas its two products are pyruvate and ferrocytochrome c. This enzyme belongs to the family of oxidoreductases, specifically those acting on the CH-OH group of donor with a cytochrome as acceptor. This enzyme participates in pyruvate metabolism. It employs one cofactor, FAD.
Applications	Use D-Lactate Dehydrogenase (D-LDH), Grade II, in a variety of diagnostic tests, e.g., in the determination of alanine aminotransferases, lactate or pyruvate. Used for the removal of pyruvate in determinations working with NADH (i.e., triglycerides, lipase, aldolase, aspartate aminotransferases, glutamate dehydrogenase).
Synonyms	D-Lactic Dehydrogenase; (D)-lactate:ferricytochrome-c 2-oxidoreductase; lactic acid dehydrogenase; D-lactate (cytochrome) dehydrogenase; cytochrome-dependent D-(−)-lactate dehydrogenase; D-lactate-cytochrome c reductase; D-(−)-lactic cytochrome c reductase

Product Information

Source	Lactobacillus delbrückii
Appearance	White to yellowish lyophilizate
CAS No.	9028-36-8
Activity	>150 U/mg
Contaminants	Alcohol dehydrogenase: <0.01 Glucose dehydrogenase: <0.01 Malate dehydrogenase: <0.1 Succinate dehydrogenase: <0.01
pH Stability	4.0-10.0
Optimum pH	7
Thermal stability	Up to +50°C
Michaelis Constant	D-lactate: 0.7 x 10-1 mol/l (NAD, 2 mmol/l) Pyruvate: 1.2 x 10-3 mol/l (NADH, 0.1 mmol/l) NADH: 7.1 x 10-5 mol/l (pyruvate, 20 mmol/l)
Specificity	Lactate dehydrogenase is specific for D(–)-lactate, L(+)-lactate does not react.

Storage and Shipping Information

Stability	At +2 to +8°C within specification range for 12 months. Store dry.