

## 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  $\rightleftharpoons$  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:  $0.7 \times 10^{-1}$  mol/l (NAD, 2 mmol/l) Pyruvate:  $1.2 \times 10^{-3}$  mol/l (NADH, 0.1 mmol/l) NADH:  $7.1 \times 10^{-5}$  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.