

Prokaryotic 3-Hydroxybutyrate dehydrogenase, Recombinant

Cat. No. NATE-1099

Lot. No. (See product label)

Introduction

Description

In enzymology, 3-hydroxybutyrate dehydrogenase (EC 1.1.1.30) is an enzyme that catalyzes the chemical reaction: (R)-3-hydroxybutanoate + NAD⁺ \rightleftharpoons acetoacetate + NADH + H⁺. Thus, the two substrates of this enzyme are (R)-3-hydroxybutanoate and NAD⁺, whereas its three products are acetoacetate, NADH, and H⁺. This enzyme belongs to the family of oxidoreductases, to be specific, those acting on the CH-OH group of donor with NAD⁺ or NADP⁺ as acceptor. This enzyme participates in the synthesis and degradation of ketone bodies and the metabolism of butyric acid.

Synonyms

3-hydroxybutyrate dehydrogenase; 3-HBDH; NAD- β -hydroxybutyrate dehydrogenase; hydroxybutyrate oxidoreductase; β -hydroxybutyrate dehydrogenase; D- β -hydroxybutyrate dehydrogenase; D-3-hydroxybutyrate dehydrogenase; D-(-)-3-hydroxybutyrate dehydrogenase; β -hydroxybutyric acid dehydrogenase; 3-D-hydroxybutyrate dehydrogenase; β -hydroxybutyric dehydrogenase; EC 1.1.1.30; 9028-38-0

Product Information

Source

Microorganism

Form

Liquid

EC Number

EC 1.1.1.30

CAS No.

9028-38-0

Molecular Weight

~ 29kD

Activity

~ 140 U/mg protein

Unit Definition

One Unit is defined as the amount of enzyme required to oxidise one μ mole of D- β -hydroxybutyric acid per minute in the presence of NAD⁺ in Tris-HCl buffer at pH 8.0 and 25°C.

Storage and Shipping Information

Storage

4°C