Creative Enzymes®

Galactose dehydrogenase/Galactose mutarotase from E. coli, Recombinant

Cat. No. NATE-1070

Lot. No. (See product label)

Introduction

Description In enzymology, a galactose 1-dehydrogenase (EC 1.1.1.48) is an enzyme that catalyzes the chemical reaction: D-galactose + NAD+ rightleftharpoons D-galactono-1,4-lactone + NADH + H+. Thus, the two substrates of this enzyme are D-galactose and NAD+, whereas its 3 products are D-galactono-1,4-lactone, NADH, and H+. This enzyme belongs to the family of oxidoreductases, specifically those acting on the CH-OH group of donor with NAD+ or NADP+ as acceptor. This enzyme participates in galactose metabolism. In enzymology, an aldose 1-epimerase (EC 5.1.3.3) is an enzyme that catalyzes the chemical reaction:alpha-D-glucose↔ beta-D-glucose. Hence, this enzyme has one substrate, alpha-D-glucose, and one product, beta-D-glucose. This enzyme belongs to the family of isomerases, specifically those racemases and epimerases acting on carbohydrates and derivatives. This enzyme participates in glycolysis and gluconeogenesis.

Synonyms D-galactose:NAD+ 1-oxidoreductase; D-galactose dehydrogenase; beta-galactose dehydrogenase; NAD+-dependent D-galactose dehydrogenase; galactose 1-dehydrogenase; EC 1.1.1.48; Galactose dehydrogenase; mutarotase; aldose mutarotase; galactose mutarotase; galactose 1-epimerase; D-galactose 1-epimerase; aldose 1-epimerase; EC 5.1.3.3

Product Information

Source E. coli

Form Liquid

EC Number EC 1.1.1.48, EC 5.1.3.3

CAS No. 9028-54-0; 9031-76-9

Activity ~ 200 U/ml

Unit Definition One Unit of galactose dehydrogenase is defined as the amount of enzyme required to produce one µmole of NADH from NAD+ per minute at pH 8.6 and 25°C.

Storage and Shipping Information

Storage 4°C