Creative Enzymes®

Alanine Dehydrogenase from Bacillus cereus, Recombinant

Cat. No. NATE-0044

Lot. No. (See product label)

Introduction

Description	L-Alanine dehydrogenase is an A-stereospecific dehydrogenase that catalyzes the reversible deamination of L-alanine to pyruvate and ammonium. It is important for the geneRation of pyruvate during sporulation. L-Alanine dehydrogenase from Bacillus subtilis has a predominately ordered kinetic mechanism in which NAD binds before L-alanine. Subsequently, ammonia, pyruvate, and NADH are released in that specific order. Optimal pH for the amination reaction is 8.8-9.0, whereas it is 10-10.5 for the deamination reaction. The enzyme is inactivated by divalent metal ions and p-chloromercuribenzoate, mercuric ion being most effective. The inactivation may be reversed by L-or D-cysteine.
Synonyms	L-Alanine Dehydrogenase; Alanine dehydrogenase; EC 1.4.1.1; 9029-06-5; AlaDH; NAD+-linked alanine dehydrogenase; alpha-alanine dehydrogenase; NAD+-dependent alanine dehydrogenase; alanine oxidoreductase; NADH-dependent alanine dehydrogenase

Product Information

Species	Bacillus cereus
Source	E. coli
EC Number	EC 1.4.1.1
CAS No.	9029-06-5
Activity	> 350 units/ml
Unit Definition	1 U corresponds to the amount of enzyme which converts 1 μmol L-alanine per minute at pH 10.0 and 30°C (NAD+ as cofactor).

Storage and Shipping Information

Storage	−20°C