Creative Enzymes®

Aldehyde Dehydrogenase 2 from Human, Recombinant

Cat. No. NATE-0804

Lot. No. (See product label)

Introduction

Description	ALDH2 is part of the aldehyde dehydrogenase family of proteins which catalyze the chemical transformation from acetaldehyde to acetic acid. ALDH2 is the second enzyme of the major oxidative pathway of alcohol metabolism. ALDH2 has 2 major liver isoforms: cytosolic and mitochondrial, which differ by their electrophoretic mobilities, kinetic properties, and subcellular localizations. Nearly all Caucasians have 2 major isozymes, whereas roughly 50% of Orientals have only the cytosolic isozyme, omitting the mitochondrial isozyme. The extremely higher rate of acute alcohol intoxication with Orientals compared to Caucasians is due to the fact of the absence of mitochondrial isozyme. ALDH2 has a low Km for acetaldehydes, and is localized in mitochondrial matrix.
Synonyms	ALDM; ALDHI; ALDH-E2; MGC1806; ALDH2; Aldehyde dehydrogenase mitochondrial; ALDH class 2

Product Information

Species	Human
Source	E. coli
Appearance	Sterile Filtered clear solution.
Molecular Weight	54.5 kDa
Purity	Greater than 90.0% as determined by SDS-PAGE.
Activity	> 0.14 units/ml
Buffer	ALDH2 protein contains 20mM Tris-HCl buffer, pH-7.5, 1mM DTT, 1mM EDTA and 10% Glycerol.
Unit Definition	1 unit will oxidize 1umole of acetaldehyde to acetic acid per minute at pH 8 at 25°C in the presence of beta-NAD, potassium and thiols.

Storage and Shipping Information

Stability	Store vial at -20°C to -80°C. When stored at the recommended temperature, this protein is stable for 12 months. Please prevent freeze-thaw cycles.