Creative Enzymes®

Native Rat Sorbitol Dehydrogenase

Cat. No. NATE-0667

Lot. No. (See product label)

Introduction

Description	Sorbitol dehydrogenase (or SDH) is a cytosolic enzyme. In humans this protein is encoded by the SORD gene. Sorbitol dehydrogenase is an enzyme in carbohydrate metabolism converting sorbitol, the sugar alcohol form of glucose, into fructose. Together with aldose reductase, it provides a way for the body to produce fructose from glucose without using ATP. Sorbitol dehydrogenase uses NAD+ as a cofactor; its reaction is sorbitol + NAD+--> fructose + NADH + H+. A zinc ion is also involved in catalysis. Organs that use it most frequently include the liver and seminal vesicle; it is found in all kinds of organisms from bacteria to humans. A secondary use is the metabolism of dietary sorbitol, though sorbitol is known not to be absorbed as well in the intestine as its related compounds glucose and fructose, and is usually found in quite small amounts in the diet (except when used as an artificial sweetener).
Synonyms	Sorbitol Dehydrogenase; SDH; EC 1.1.1.14; 9028-21-1; L-iditol 2-dehydrogenase; polyol dehydrogenase; sorbitol dehydrogenase; L-iditol:NAD+ 5-oxidoreductase; L-iditol (sorbitol) dehydrogenase; glucitol dehydrogenase; L-iditol:NAD+ oxidoreductase; NAD+-dependent sorbitol dehydrogenase; NAD+-sorbitol dehydrogenase

Product Information

Species	Rat
Source	Rat Liver
Form	Lyophilized
EC Number	EC 1.1.1.14
CAS No.	9028-21-1
Purity	Purified
Activity	Reported in U/mg
Contaminants	ALP, Arginase, gGT, ALT/GPT, AST/GOT, GST: Reported (Customizable)
Pathway	Fructose and mannose metabolism, organism-specific biosystem; Glucuronate pathway (uronate pathway), organism-specific biosystem; Pentose and glucuronate interconversions, conserved biosystem
Function	L-iditol 2-dehydrogenase activity; NAD binding; identical protein binding
Unit Definition	One unit will catalyze the conversion of one micromole of D-fructose and NADH to D-sorbitol and NAD per minute at 37°C and pH 7.6.

Storage and Shipping Information

Storage	-20°C