Creative Enzymes®

Isocitrate Dehydrogenase (NADP+) from Bacteria, Recombinant

Cat. No. NATE-1029

Lot. No. (See product label)

Introduction

Description	Isocitrate dehydrogenase (IDH) (EC 1.1.1.42) is an enzyme that catalyzes the oxidative decarboxylation of Isocitrate, producing alpha-ketoglutarate (α-ketoglutarate) and CO2. This is a two-step process, which involves oxidation of Isocitrate (a secondary alcohol) to oxalosuccinate (a ketone), followed by the decarboxylation of the carboxyl group beta to the ketone, forming alpha-ketoglutarate. In humans, IDH exists in three isoforms:IDH3 catalyzes the third step of the citric acid cycle while converting NAD+ to NADH in the mitochondria. The isoforms IDH1 and IDH2 catalyze the same reaction outside the context of the citric acid cycle and use NADP+ as a cofactor instead of NAD+. They localize to the cytosol as well as the mitochondrion and peroxisome.
Synonyms	Isocitrate Dehydrogenase (NADP+); EC 1.1.1.42; IDH; Isocitrate Dehydrogenase; NADP-dependent isocitric dehydrogenase; NADP-linked Isocitrate dehydrogenase; NADP-specific Isocitrate dehydrogenase; Oxalosuccinate decarboxylase; Oxalsuccinic decarboxylase; Triphosphopyridine nucleotide-linked Isocitrate dehydrogenase-oxalosuccinate carboxylase

Product Information

Species	Bacteria
Source	E. coli
Form	Lyophilized powder
EC Number	EC 1.1.1.42
CAS No.	9028-48-2
Activity	> 20 U/mg protein
Contaminants	NADPH oxidase < 0.01 % Phosphatase < 0.00015 %

Storage and Shipping Information

Storage	Below -20°C