

Isocitrate Dehydrogenase (NADP+) from Yeast, Recombinant

Cat. No. NATE-0351

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; Dual-cofactor-specific Isocitrate dehydrogenase; IDP; Isocitrate (NADP) dehydrogenase; Isocitrate (nicotinamide adenine dinucleotide phosphate) dehydrogenase; Isocitrate dehydrogenase (NADP); Isocitrate dehydrogenase (NADP-dependent); NADP isocitric dehydrogenase; NADP (+)-ICDH; NADP (+)-IDH; NADP (+)-linked Isocitrate dehydrogenase; NADP-dependent Isocitrate dehydrogenase; NADP-dependent isocitric dehydrogenase; NADP-linked Isocitrate dehydrogenase; NADP-specific Isocitrate dehydrogenase; Oxalosuccinate decarboxylase; Oxalosuccinic decarboxylase; Triphosphopyridine nucleotide-linked Isocitrate dehydrogenase-oxalosuccinate carboxylase

Product Information

Species	Yeast
Source	Pichia pastoris
Form	Liquid
EC Number	EC 1.1.1.42
CAS No.	9028-48-2
Activity	r-ICDH activity = 100%
Contaminants	NAD ⁺ :
Specificity	Typically >35 U/mg protein

Storage and Shipping Information

Storage	-20°C
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