

## 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 ( $\alpha$ -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-dependent isocitrate denydrogenase; 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	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