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## Product Data Sheet

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Product Name: IDH1  
Cat. No.: GP21818  
Batch No.: 1

### Product Data

Purity	>98%	Source	Yeast cells.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Isocitrate dehydrogenase [NADP] cytoplasmic; EC 1.1.1.42; Cytosolic NADP-isocitrate dehydrogenase; Oxalosuccinate decarboxylase; IDH; NADP(+)-specific ICDH; IDP; PICD.		
Formulation	One ml of solution contains 0.075 mol/l KPO <sub>4</sub> , 50% Glycerol, pH 7.1.		

### Introduction

Isocitrate Dehydrogenase is an enzyme of the oxidoreductase class that catalyzes the conversion of isocitrate and NAD<sup>+</sup> to yield 2-ketoglutarate, carbon dioxide, and NADH. It occurs in cell mitochondria. The enzyme requires Mg<sup>2+</sup>, Mn<sup>2+</sup>; it is activated by ADP, citrate, and Ca<sup>2+</sup>, and inhibited by NADH, NADPH, and ATP. The reaction is the key rate-limiting step of the citric acid (tricarboxylic) cycle.

### Biological Activity

The specific activity was found to be 115 U/mg.

### Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

### Background

Recombinant *Saccharomyces Cerevisiae* ICDH (NADP) derived from yeast host cells by using over-expression system, is full length same as designated ICD1 from *Saccharomyces Cerevisiae*. The N-terminal amino acid Phenylalanine residue next to Met is substituted with Alanine for overexpression. The ICDH is purified by proprietary chromatographic techniques.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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