

## isocitrate dehydrogenase (NADP+)

Cat. No. EXWM-0327

Lot. No. (See product label)

### Introduction

**Description** Requires  $Mn^{2+}$  or  $Mg^{2+}$  for activity. Unlike EC 1.1.1.41, isocitrate dehydrogenase (NAD<sup>+</sup>), oxalosuccinate can be used as a substrate. In eukaryotes, isocitrate dehydrogenase exists in two forms: an NAD<sup>+</sup>-linked enzyme found only in mitochondria and displaying allosteric properties, and a non-allosteric, NADP<sup>+</sup>-linked enzyme that is found in both mitochondria and cytoplasm. The enzyme from some species can also use NAD<sup>+</sup> but much more slowly.

**Synonyms** oxalosuccinate decarboxylase; oxalsuccinic decarboxylase; isocitrate (NADP) dehydrogenase; isocitrate (nicotinamide adenine dinucleotide phosphate) dehydrogenase; NADP-specific isocitrate dehydrogenase; NADP-linked isocitrate dehydrogenase; NADP-dependent isocitrate dehydrogenase; NADP isocitric dehydrogenase; isocitrate dehydrogenase (NADP-dependent); NADP-dependent isocitric dehydrogenase; triphosphopyridine nucleotide-linked isocitrate dehydrogenase-oxalosuccinate carboxylase; NADP<sup>+</sup>-linked isocitrate dehydrogenase; IDH (ambiguous); dual-cofactor-specific isocitrate dehydrogenase; NADP<sup>+</sup>-ICDH; NADP<sup>+</sup>-IDH; IDP; IDP1; IDP2; IDP3

### Product Information

**Form** Liquid or lyophilized powder

**EC Number** EC 1.1.1.42

**CAS No.** 9028-48-2

**Reaction** isocitrate + NADP<sup>+</sup> = 2-oxoglutarate + CO<sub>2</sub> + NADPH + H<sup>+</sup> (overall reaction); (1a) isocitrate + NADP<sup>+</sup> = oxalosuccinate + NADPH + H<sup>+</sup>; (1b) oxalosuccinate = 2-oxoglutarate + CO<sub>2</sub>

**Notes** This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

### Storage and Shipping Information

**Storage** Store it at +4 °C for short term. For long term storage, store it at -20 °C~-80 °C.