
Product Data Sheet

Product Name: MDH1 Chicken

Cat. No.: GP21907

Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Malate dehydrogenase cytoplasmic; EC 1.1.1.37; Cytosolic malate dehydrogenase; MDHA; MOR2; MDH-s; MGC:1375; MDH1.		
Solubility	It is recommended to reconstitute the lyophilized Malate dehydrogenase in sterile 18MΩ-cm H ₂ O.		
Formulation	Each mg of protein contains 0.59mg NaPO ₄ .		

Introduction

Malate dehydrogenase (EC1.1.1.37) is an enzyme in the citric acid cycle that catalyzes the conversion of malate into oxaloacetate (using NAD⁺) and vice versa (this is a reversible reaction). Malate dehydrogenase is not to be confused with malic enzyme, which catalyzes the conversion of pyruvate using NADPH. Malate dehydrogenase is also involved in gluconeogenesis, the synthesis of glucose from smaller molecules. Pyruvate in the mitochondria is acted upon by pyruvate carboxylase to form oxaloacetate, a citric acid cycle intermediate. In order to get the oxaloacetate out of the mitochondria, malate dehydrogenase reduces it to malate, and it then traverses the inner mitochondrial membrane. Once in the cytosol, the malate is oxidized back to oxaloacetate by cytosolic malate dehydrogenase. Finally, phosphoenol-pyruvate carboxy kinase (PEPCK) converts oxaloacetate to phosphoenol pyruvate.

Stability

Lyophilized Malate dehydrogenase although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution MDH1 should be stored at 4°C between 2-7 days and for future use below -18°C. Please prevent freeze-thaw cycles.

Background

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

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The DNA encoding Malate (Malic) Dehydrogenase is cloned from cDNA library of chicken heart. The MDH1 is purified by proprietary chromatographic techniques.

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