

Recombinant Chicken Malate Dehydrogenase 1, NAD (Soluble)

Cat. No. MDH1-1374C **Lot. No.** (See product label)

SPECIFICATION

Product Overview	The DNA encoding Malate (Malic) Dehydrogenase is cloned from cDNA library of chicken heart. The MDH1 is purified by proprietary chromatographic techniques.
Species	Chicken
Source	Chicken
Description	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.
Form	Each mg of protein contains 0.59mg NaPO ₄ .
Purity	Greater than 95.0% as determined by(a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.

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Physical Appearance	Sterile lyophilized powder.
Solubility	It is recommended to reconstitute the lyophilized Malate dehydrogenase in sterile 18Mμ-cm H ₂ O.
Storage	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.

GENE INFORMATION

Gene Name	MDH1 malate dehydrogenase 1, NAD (soluble) [Homo sapiens]
Official Symbol	MDH1
Synonyms	MDH1; malate dehydrogenase 1, NAD (soluble); OTTHUMP00000202070; cytosolic malate dehydrogenase; malate dehydrogenase, cytoplasmic; soluble malate dehydrogenase; MDHA; MOR2; MDH-s; MGC: 1375; EC 1.1.1.37
Gene ID	4190
mRNA Refseq	NM_005917
Protein Refseq	NP_005908
MIM	154200
UniProt ID	P40925
Chromosome	2p13.3

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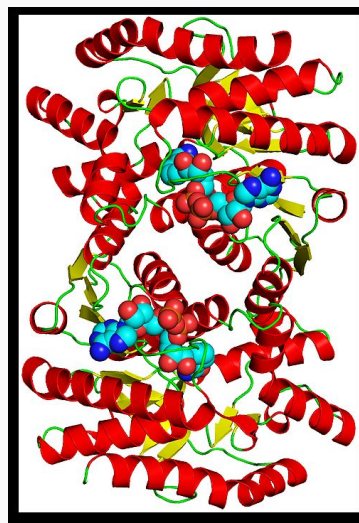
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Location

Function

L-malate dehydrogenase activity; NAD or NADH binding; malic enzyme activity; oxidoreductase activity

Structure of the protein with attached sugars



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