83103 Avenue 48, Ste.1B #204
Coachella, CA 92236 USA
Phone : +1.6268339877
Email : info@cali-bio.com

California Bioscience

Product Datasheet

Product Name	Malate Dehydrogenase Recombinant
Cata No	CB500452
Source	Escherichia Coli.
Synonyms	Malate dehydrogenase cytoplasmic, EC 1.1.1.37, Cytosolic malate dehydrogenase, MDHA, MOR2, MDH-s, MGC:1375, MDH1

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.

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

Physical Appearance

Sterile lyophilized powder.

Purity

Greater than 95.0% as determined by:
(a) Analysis by RP-HPLC.
(b) Analysis by SDS-PAGE.

Formulation

Each mg of protein contains 0.59mg $NaPO_4$.

Stability

Lyophilized Malate dehydrogenase although stable at room temperature for 3 weeks, should be stored desiccated below -18℃. Upon reconstitution MDH1 should be stored at 4℃ between 2-7 days and for future use below -18℃.

Please prevent freeze-thaw cycles.