Malic Dehydrogenase from porcine heart

Product Number  M 2634
Storage Temperature  2-8 °C

Product Description
Enzyme Commission Number: 1.1.1.37
CAS Number: 9001-64-3
Molecular Weight: 70 kDa
pI: 10.0
Synonyms: Malate dehydrogenase porcine heart, L-malate: NAD⁺ oxidoreductase, mitochondrial malate dehydrogenase, MDH

Eukaryotic cells contain two different isozymes of malate dehydrogenase: mitochondrial (m-MDH) and soluble or cytoplasmic (s-MDH). This product consists of the mitochondrial form. Malate dehydrogenase from porcine heart is a dimer consisting of two equal subunits with a molecular weight of 35 kDa.

The enzyme catalyzes the following reaction:

\[ \text{Oxaloacetate} + \beta\text{-NADH} \rightarrow \text{L-Malate} + \beta\text{-NAD} \]

Reported \( K_m \) values are L-Malate (0.4 mM) and oxaloacetate (0.033 mM). The enzyme is specific for the L isomeric configuration of malate, as D-malate is not a substrate.

The activity of malate dehydrogenase is inhibited by ATP, ADP, AMP, thyroxine, iodine cyanide, and molecular iodine.

Precautions and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Storage/Stability
This product is offered as a malic dehydrogenase solution in 50% glycerol containing 50 mM potassium phosphate buffer, pH 7.5. Dilute stock solutions should not be prepared.

References

TMG/AJH  1/03