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## Product Information

### Malic Dehydrogenase from bovine heart

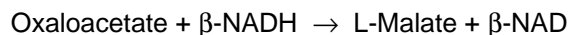
Product Number **M 9004**  
Storage Temperature 2-8 °C

#### Product Description

Enzyme Commission (EC) Number: 1.1.1.37  
CAS Number: 9001-64-3  
Molecular Weight: 70 kDa  
pI: 8.0-8.5<sup>2</sup>  
Synonyms: L-Malate: NAD<sup>+</sup> oxidoreductase, MDH

Eukaryotic cells contain two different isozymes of malate dehydrogenase: mitochondrial (m-MDH) and soluble or cytoplasmic (s-MDH). This product is predominantly the mitochondrial form, but some of the cytoplasmic form is present. Malate dehydrogenase from bovine heart is a dimer consisting of two equal subunits with a molecular weight of 35 kDa.<sup>3</sup>

The enzyme catalyzes the following reaction:



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.<sup>1</sup>

#### Precautions and Disclaimer

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

#### Storage/Stability

This product is offered as an ammonium sulfate suspension of malic dehydrogenase. It is not recommended that dilute stock solutions be prepared.

#### References

1. Banaszak, L.J., and Bradshaw, R.A., in *The Enzymes*, 3rd ed., Vol. 11, Boyer, P.D., ed., Academic Press (New York: 1975), 369-396.
2. Righetti, P.G., and Tudor, G., Isoelectric points and molecular weights of proteins: a new table. *Journal of Chromatography*, **220**, 115-194 (1981).

TMG/JRC 1/03

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