

## Malate Dehydrogenase Assay Kit

### Product Information

**Cat.No.**

Kit-2078

**Product Overview**

The non-radioactive, colorimetric MDH assay is based on the reduction of the tetrazolium salt MTT in a NADH-coupled enzymatic reaction to a reduced form of MTT which exhibits an absorption maximum at 565 nm. The increase in absorbance at 565 nm is proportional to the enzyme activity.

**Size**

100 tests

**Description**

MALATE DEHYDROGENASE (MDH) (EC 1.1.1.37) is an enzyme which reversibly catalyzes the oxidation of L-malate to oxaloacetate in the presence of NAD. There are 2 isoforms in eukaryotic cells: MDH1 and MDH2. MDH1 found in the cytoplasm and plays a key part in the malateaspartate shuttle for transporting malate into the mitochondria. MDH2 is a mitochondrial enzyme which participates in the TCA cycle that reversibly converts L-malate into oxaloacetate. Higher MDH activities are found in some neurodegenerative diseases such as Alzheimer's disease.

**Applications**

For quantitative determination of L-malate dehydrogenase enzyme activity and drug effects on malate dehydrogenase metabolism.

**Storage**

The kit is shipped on ice. Store all components at -20°C upon receiving. Shelf life: 6 months after receipt.

**Kit Components**

Assay Buffer: 10 mL Enzyme A: 120 µL NAD/MTT: 1 mL Enzyme B: 120 µL Substrate: 600 µL Calibrator: 1.5 mL

**Detection method** OD565nm

## Malate Dehydrogenase Assay Kit

### Compatible Sample Types

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Biological samples (e.g. plasma, serum, erythrocytes, tissue and culture media).

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### Features & Benefits

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- Fast and sensitive. Linear detection range (20  $\mu$ L sample): 0.5 to 65 U/L for 20 min reaction at 37°C.
- Convenient and high-throughput. Homogeneous "mix-incubate-measure" type assay. Can be readily automated on HTS liquid handling systems for processing thousands of samples per day.

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### Assay time

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30 min

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### Sensitivity

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Detection Limit: 0.5 U/L

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