CREATIVE BIOMART®
Assay Kit

Malate Dehydrogenase 2 Activity Assay Kit

Product Information

Cat.No. Kit-0545

Size

1 x 96 well plate

Description

Mitochondrial malate dehydrogenase (MDH2, P40926) is a 35.5 kDa enzyme that catalyzes the conversion of malate into oxaloacetate (using NAD+) and vice versa. (EC 1.1.1.37) Several isozymes of malate dehydrogenase exist, depending on where they are localized in the cell and their specific dependence on NAD+ or NADP+ (only in chloroplasts). There are two main isoforms in eukaryotic cells. One is found in the mitochondrial matrix (MDH2), participating as a key enzyme in the citric acid cycle that catalyzes the oxidation of malate. The other is found in the cytoplasm (MDH1), assisting the malate-aspartate shuttle with exchanging reducing equivalents so that malate can pass through the mitochondrial membrane to be transformed into oxaloacetate for further cellular processes. Because malate dehydrogenase is closely tied to the citric acid cycle, regulation is highly dependent on TCA products. High malate concentrations stimulate MDH activity, and, in a converse manner, high oxaloacetate concentrations inhibit the enzyme. Enzyme activity is enhanced by acetylation.

Applications

Functional Studies

Target Species

Reacts with: Mouse, Rat, Human

Storage

All components are shipped cold. Reagent dye, coupler, malate and NAD+ are shipped lyophilized. Before use rehydrate by adding 0.25 mL pure H2O to each tube and vortex each tube thoroughly to dissolve. After hydration unused amounts of these four materials should be stored at -80°C for 6 months. Store all other components at 4°C. This kit is Stable for 6 months from receipt.

Kit Components

Tel: 1-631-559-9269 1-516-512-3133
Email:info@creative-biomart.org
Fax:1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

CREATIVE BIOMART®
Assay Kit

Malate Dehydrogenase 2 Activity Assay Kit

Components 1 x 96 tests100X Coupler 1 unit100X NAD+ 1 unit100X Reagent Dye 1 unit100X Sodium Malate 1 unit10X Blocking Buffer 1 x 8ml20X Buffer 1 x 20mlBase Buffer 1 x 24mlExtraction Buffer 1 x 15mlMDH2 Microplate 1 unit

Detection method Colorimetric

Compatible Sample Types

Cell culture extracts, Tissue Extracts

Sensitivity

0.78 μg/ml

Tel: 1-631-559-9269 1-516-512-3133

Email:info@creative-biomart.org

Fax:1-631-938-8127

45-1 Ramsey Road, Shirley, NY 11967, USA