

We offer various packaging (protein concentration, activity, etc.) if necessary.

Data sheet

Enzyme ; **Malate dehydrogenase (Decarboxylating)**

Code ; MDH-73-01

Lot No. ;

Protein conc. ; mg/ml

Volume ; ml

Form ; 50 mM Tris-HCl (pH 8.0), 50 mM NaCl

Storage ; -20 °C

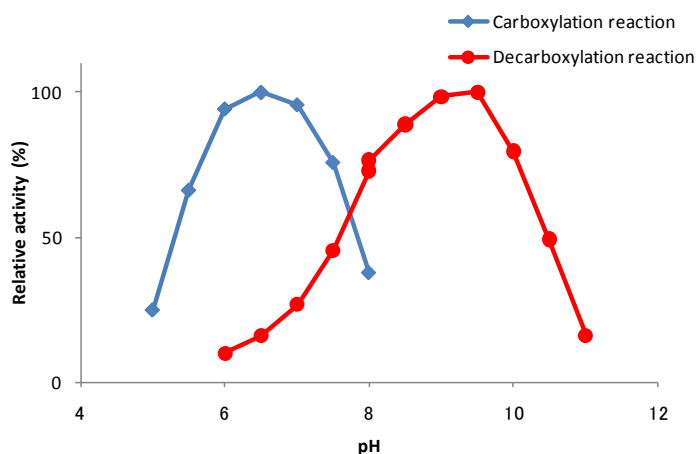
Activity ; U/ml

Notes ; For research use only.

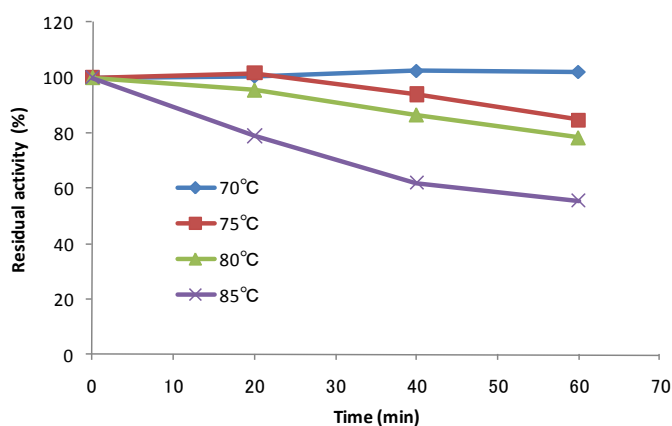
Activity measurement

Reaction mix (50 mM PIPES-KOH (pH 6.5), 10 mM Pyruvic acid, 0.3 mM NADH, 10 mM NaHCO₃, 10 mM MgCl₂ and appropriate amount of the enzyme) was incubated at 37 °C and A₃₄₀ was monitored. One unit is defined as the amount of the enzyme oxidizing 1 μmol of NADH ($\epsilon_{340}=6.22 \text{ mM}^{-1} \text{ cm}^{-1}$) per 1 minute using Pyruvic acid as a substrate.

pH profile

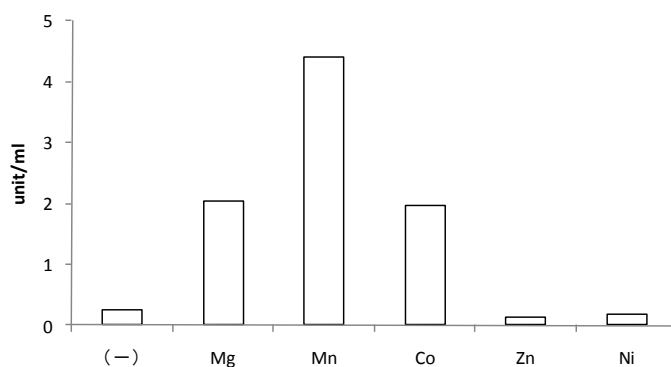


Thermostability

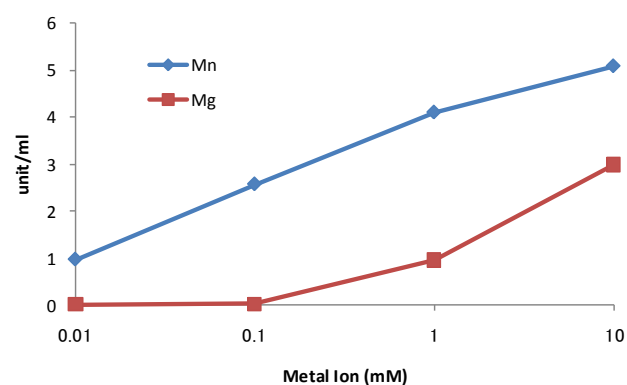


Effect of metal ions on the activity

(a) Divalent metal ion specificity



(b) Concentration dependence



Kinetic parameters

(a) Carboxylation reaction (K_m @ 37 °C, pH 6.5)

Pyruvic acid: 0.89 mM, NaHCO_3 : 0.83 mM, NADH: 0.042 mM

(b) Decarboxylation reaction (K_m @ 37 °C, pH 9.5)

L-Malic acid: 0.14 mM, D-Malic acid: 3.6 mM, NAD^+ : 0.12 mM