rLDH(RM)

recombinant Lactate dehydrogenase EC 1.1.1.27

from Rabbit muscle

Reaction Equation

L-Lactate + NAD^+ ⇄ Pyruvate + NADH + H^+

Specification

Specific Activity

U/mg protein	> 400 units

Contaminants

Malate dehydrogenase	< 0.03%
Myokinase	< 0.01%
Pyruvate kinase	< 0.01%
Glutamic-pyruvic transaminase*	< 0.005%
Glutamic-oxaloacetic transaminase*	< 0.005%

*Including α-Hydroxyglutarate dehydrogenase activity

Properties

pH stability : pH 6.5 - 8.0 (25 °C, 1 week)
Thermal stability : ≦ 45 °C (pH 7.5, 10 min)
Optimum pH : 6.0
Optimum temp. : 50 °C
Km value : 2.1 × 10^{-4} mol/L (Pyruvate)
1.2 × 10^{-5} mol/L (NADH)
Molecular weight : 34 kDa (SDS-PAGE)

Assay Procedure

I Spectrophotometric Method

Wavelength : 340 nm, Light path length : 1 cm
Final volume : 3.17 mL, Temperature : 25 °C

Pipette the following reagents into a cuvette

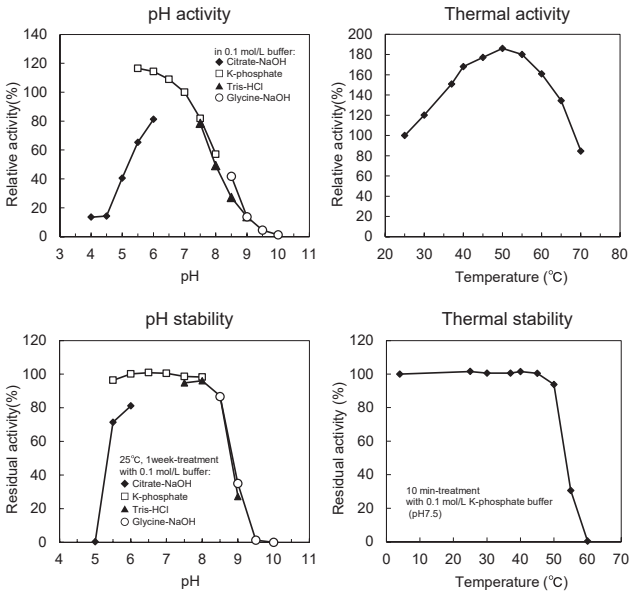
3.00 mL	K-phosphate buffer (0.1 mol/L, pH 7.0)
0.10 mL	Na-pyruvate (25.4 mmol/L)
0.05 mL	NADH (10 mg/mL) dissolved in Tris (10 mmol/L)
0.02 mL	rLDH (RM) (approx. 3 U/mL)

II Calculation

$$\frac{\Delta\ A/min \cdot V \cdot D}{6.3 \cdot d \cdot v} = U/mL$$

Δ A/min = The change in absorbance at 340 nm/minute
V = Total volume of reaction mixture (3.17 mL)
D = Enzyme dilution factor
6.3 = mmol/L extinction coefficient of NADH ($L \cdot mmol^{-1} \cdot cm^{-1}$)
d = Light path length (1 cm)
v = Volume of enzyme sample (0.02 mL)

Reference Data



Preparation and Storage

Lyophilized powder
Store below -20 °C

Cat. No./Package

Cat. No.	Package	Cat. No.	Package
46776003	10,000 units	46782003	100,000 units
46781003	50,000 units	46764900	Bulk

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