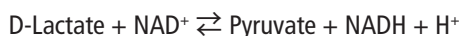


rD-LDH(L)

recombinant D-Lactate dehydrogenase EC 1.1.1.28

from *Leuconostoc* sp.

Reaction Equation



Specification

Specific Activity

U/mg protein > 1,000 units

Contaminants

Malate dehydrogenase < 0.01%

Myokinase < 0.02%

Pyruvate kinase < 0.003%

Glutamic-pyruvic transaminase* < 0.001%

Glutamic-oxaloacetic transaminase* < 0.001%

*Including α -Hydroxyglutarate dehydrogenase activity

Properties

pH stability : pH 5.5 - 9.5 (25°C, 1 week)

Thermal stability : $\leq 40^\circ\text{C}$ (pH 7.5, 10 min)

Optimum pH : 6.5

Optimum temp. : 25 - 30°C

K_m value : 8.4×10^{-4} mol/L (Pyruvate)
 9.9×10^{-5} mol/L (NADH)

Molecular weight : 38 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	Li-pyruvate or Na-pyruvate (25.4 mmol/L)
0.05 mL	NADH (10 mg/mL) dissolved in Tris (10 mmol/L)
0.02 mL	rD-LDH(L) (approx. 3 U/mL)

II Calculation

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

$\Delta A/\text{min}$ = The change in absorbance at 340 nm/minute

V = Total volume of reaction mixture (3.17 mL)

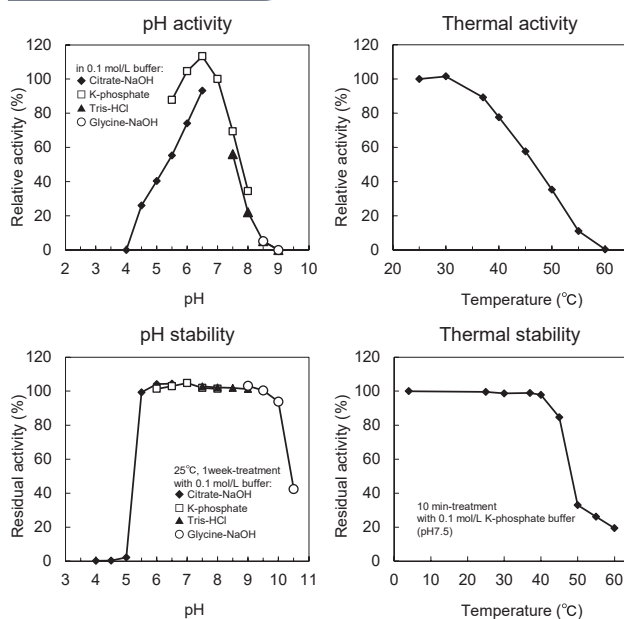
D = Enzyme dilution factor

6.3 = mmol/L extinction coefficient of NADH
 $(\text{L} \cdot \text{mmol}^{-1} \cdot \text{cm}^{-1})$

d = Light path length (1 cm)

v = Volume of enzyme sample (0.02 mL)

Reference Data



Preparation and Storage

Lyophilized powder (Ammonium sulfate free)

Store below -20°C

Cat. No./Package

Cat. No.	Package
46773003	10,000 units
46867903	Bulk

For in vitro diagnostic or research use only



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