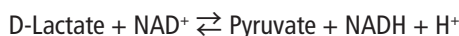


# rD-LDH

recombinant D-Lactate dehydrogenase EC 1.1.1.28

*from Bacteria*

## Reaction Equation



## Specification

### Specific Activity

U/mg protein > 800 units

### Contaminants

|                                          |          |
|------------------------------------------|----------|
| Malate dehydrogenase                     | < 0.03%  |
| Myokinase                                | < 0.02%  |
| Pyruvate kinase                          | < 0.003% |
| Glutamic-pyruvic transaminase            | < 0.001% |
| Glutamic-oxaloacetic transaminase        | < 0.001% |
| $\alpha$ -hydroxyglutarate dehydrogenase | < 0.001% |

## Properties

|                   |                                                                              |
|-------------------|------------------------------------------------------------------------------|
| pH stability      | : pH 5.5 - 9.5 (25°C, 1 week)                                                |
| Thermal stability | : $\leq 55^\circ\text{C}$ (pH 7.5, 15 min)                                   |
| Optimum pH        | : 7.0                                                                        |
| Optimum temp.     | : 45 - 50°C                                                                  |
| Km value          | : $2.6 \times 10^{-4}$ mol/L (Pyruvate)<br>$1.1 \times 10^{-4}$ mol/L (NADH) |
| Molecular weight  | : 44 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 (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)

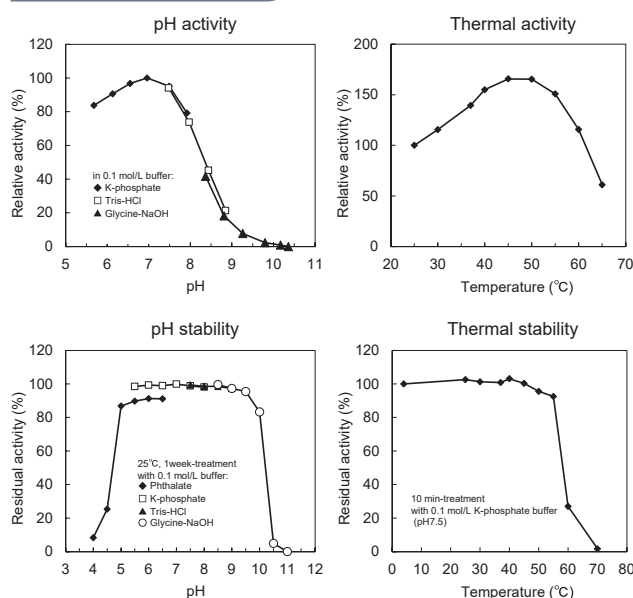
D = Enzyme dilution factor

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

Store below -20°C

## Cat. No./Package

|          |         |
|----------|---------|
| Cat. No. | Package |
| 46762903 | Bulk    |

For in vitro diagnostic or research use only



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