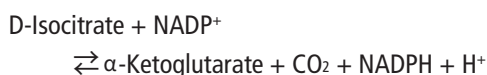


rICDH(Taq)

recombinant Isocitrate dehydrogenase (NADP⁺) EC 1.1.1.42

from Bacteria

Reaction Equation



Specification

Specific Activity

U/mg protein > 20 units

Contaminants

NADPH oxidase < 0.01%

Phosphatase < 0.00015%

Properties

pH stability : pH 6.5 - 8.5 (25°C, 1 week)

Thermal stability : ≤ 65°C (pH 8.0, 10 min)

Optimum pH : 8.5

Optimum temp. : ≥ 37°C

Km value : 6.0 × 10⁻⁵ mol/L (Isocitrate)
5.5 × 10⁻⁵ mol/L (NADP⁺)

Molecular weight : 40 kDa (SDS-PAGE)

Assay Procedure

I Spectrophotometric Method

Wavelength : 340 nm, Light path length : 1 cm

Final volume : 2.87 mL, Temperature : 25°C

Pipette the following reagents into a cuvette

2.50 mL	Tris-HCl buffer (0.1 mol/L, pH 8.5)
0.15 mL	MgCl ₂ (0.1 mol/L)
0.05 mL	Isocitrate (0.1 mol/L)
0.15 mL	NADP ⁺ (20 mmol/L)
0.02 mL	rICDH (Taq) (approx. 3 U/mL)

II Calculation

$$\frac{\Delta A/\text{min} \cdot V \cdot D}{6.2 \cdot d \cdot v} = \text{U/mL}$$

Δ A/min = The change in absorbance at 340 nm/minute

V = Total volume of reaction mixture (2.87 mL)

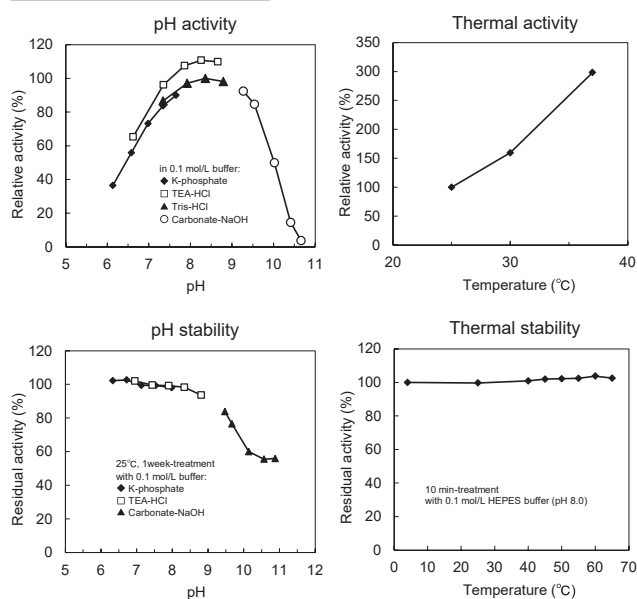
D = Enzyme dilution factor

6.2 = mmol/L extinction coefficient of NADPH
(L · mmol⁻¹ · 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
46746903 Bulk

For in vitro diagnostic or research use only

