rMutarotase

recombinant Mutarotase EC 5.1.3.3

from Pig kidney

Reaction Equation

α-D-Glucose ⇄ β-D-Glucose

Specification

Specific Activity

U/mg protein	> 170 units

Contaminants

Lactate dehydrogenase	< 0.1%
NADH oxidase	< 0.01%
Glucose oxidase	< 0.01%
Catalase	< 1.0%

Properties

pH stability	: pH 6.0 - 8.0 (25 °C, 1 week)
Thermal stability	: ≦ 45 °C (pH 7.5, 10 min)
Optimum pH	: 7.5
Optimum temp.	: 30 °C
Molecular weight	: 34 kDa (SDS-PAGE)

Assay Procedure

I Spectrophotometric Method

Wavelength : 340 nm, Light path length : 1 cm
Final volume : 3.03 mL, Temperature : 25 °C

Pipette the following reagents into a cuvette

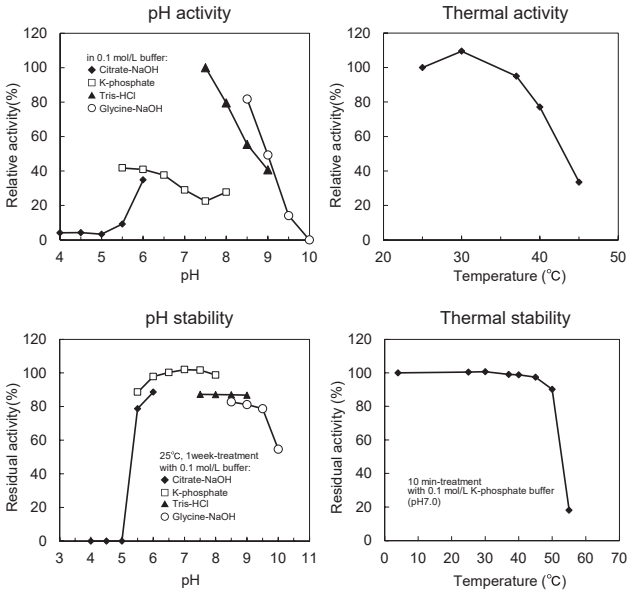
1.50 mL	Tris-HCl buffer (0.1 mol/L, pH 7.2)
0.60 mL	NAD-Na (10 mmol/L)
0.06 mL	Glucose dehydrogenase (1,000 U/mL)
0.80 mL	Distilled water
0.05 mL	α-D-Glucose (30 mmol/L)
0.02 mL	rMutarotase (approx. 3 U/mL)

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 (3.03 mL)
D = Enzyme dilution factor
6.3 = mmol/L extinction coefficient of NADH
(L·mmol^{-1}·cm^{-1})
d = Light path length (1 cm)
v = Volume of enzyme sample (0.02 mL)

Reference Data



Preparation and Storage

Ammonium sulfate suspension
Store at 1 - 10 °C

Cat. No./Package

Cat. No.	Package
46858902	Bulk

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