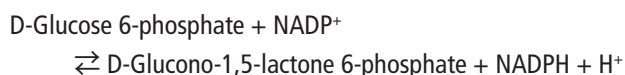


rG6PDH(Y)

recombinant Glucose 6-phosphate dehydrogenase EC 1.1.1.49

from Yeast

Reaction Equation



Specification

Specific Activity

U/mg protein > 250 units

Contaminants

Hexokinase	< 0.02%
Phosphoglucose isomerase	< 0.01%
Phosphogluconate dehydrogenase	< 0.01%
Creatine kinase	< 0.001%
Glutathione reductase	< 0.2%
Phosphoglucomutase	< 0.01%
Myokinase	< 0.01%
ATPase	< 0.001%

Properties

pH stability	: pH 5.5 - 6.5 (25°C, 1 week)
Thermal stability	: ≤ 40°C (pH 7.5, 10 min)
Optimum pH	: 8.0 - 8.5
Optimum temp.	: 50°C
Km value	: 1.0 × 10 ⁻⁴ mol/L (G6P) 5.7 × 10 ⁻⁵ mol/L (NADP ⁺)
Molecular weight	: 57 kDa (SDS-PAGE)

Assay Procedure

I Spectrophotometric Method

Wavelength : 340 nm, Light path length : 1 cm

Final volume : 3.12 mL, Temperature : 25°C

Pipette the following reagents into a cuvette

2.50 mL	Glycylglycine buffer (0.1 mol/L, pH 8.5)
0.30 mL	MgCl ₂ (0.2 mol/L)
0.15 mL	NADP ⁺ (10 mmol/L)
0.15 mL	G6P (10 mmol/L)
0.02 mL	rG6PDH(Y) (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 (3.12 mL)

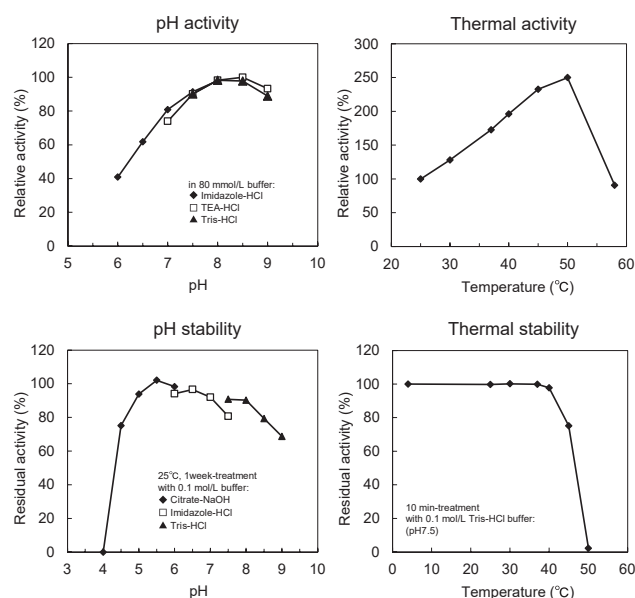
D = Enzyme dilution factor

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

Store below -20°C

Cat. No./Package

Cat. No.	Package	Cat. No.	Package
46859053	1,000 units	46859903	Bulk
46864053	5,000 units		

For in vitro diagnostic or research use only