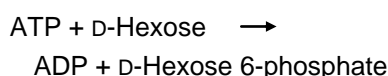


rHK(Y)

recombinant Hexokinase from yeast

ATP: D-hexose 6-phosphotransferase (EC 2.7.1.1)

Reaction Equation



Specification

Specific activity	
IU/mg protein	> 180 units
Contaminants	
Phosphoglucose isomerase	< 0.003%
Glutathione reductase	< 0.005%
Myokinase	< 0.001%
Phosphogluconate dehydrogenase	< 0.001%
Phosphoglucomutase	< 0.001%
Glucose 6-phosphate dehydrogenase	< 0.005%
Creatine kinase	< 0.005%
ATPase	< 0.003%

Preparation and Storage

Lyophilized powder
Store below -20°C

Properties

pH stability	: pH 5.0-8.0 (25°C, 1 week)
Thermal stability	: ≤40°C (pH 7.5, 10 min)
Optimum pH	: 7.5-9.0
Optimum temp.	: 50°C
Km value	: 1.8 × 10 ⁻⁴ mol/L (ATP), 2.9 × 10 ⁻⁴ mol/L (Glucose)
Molecular weight	: 54 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

2.40 mL	Triethanolamine-HCl buffer (0.1 mol/L, pH 7.5) containing Glucose (50 mg/mL)
0.30 mL	MgCl ₂ (0.1 mmol/L)
0.15 mL	ATP (10 mmol/L)
0.15 mL	NADP ⁺ (10 mmol/L)
0.01 mL	G6PDH (500 IU/mL)
0.02 mL	rHK(Y) (approx. 3 IU/mL)

II. Calculation

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

ΔA/min : The change in absorbance at 340 nm/minute
(reverse the blank activation of rHK(Y)(-))

V : Total volume of reaction mixture (3.03 mL)

D : Enzyme dilution factor

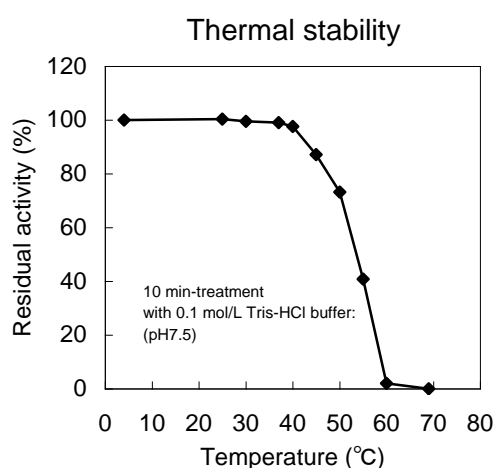
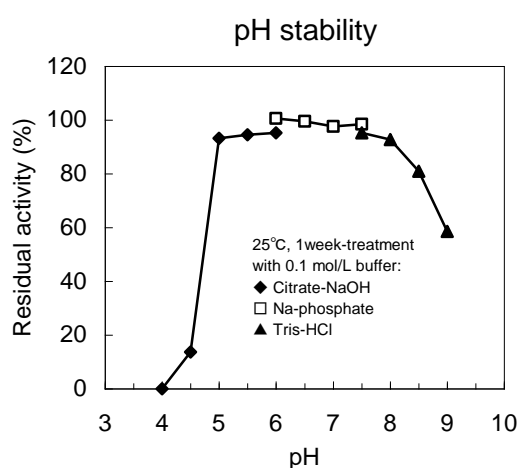
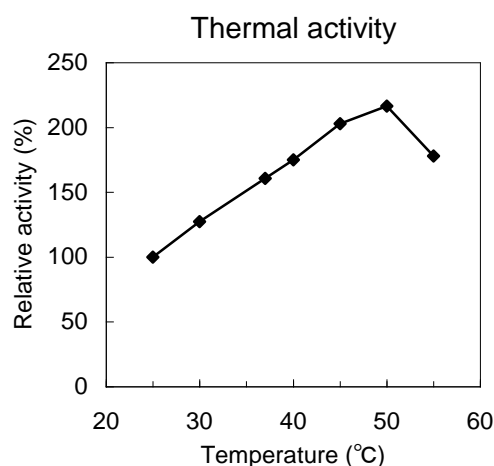
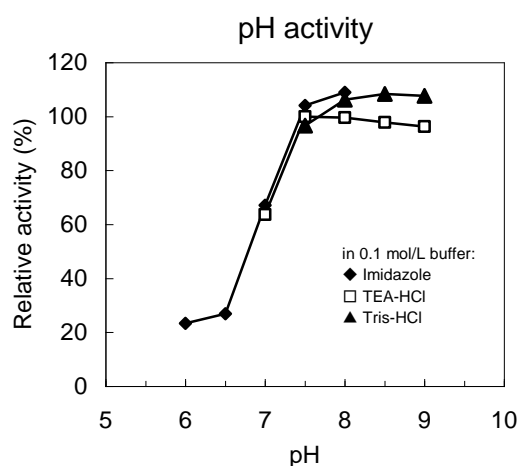
6.2 : mmol/L extinction coefficient of NADPH
(L · mmol⁻¹ · cm⁻¹)

d : Light path length (1 cm)

v : Volume of enzyme sample (0.02 mL)



Reference Data



Product name	OYC No.	Package	Price
rHK(Y)	46763900	Bulk	Please inquiry

The product is intended for in vitro diagnostic or research use only.



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