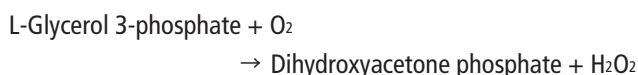


recombinant Glycerol 3-phosphate oxidase EC 1.1.3.21

from *Bacteria*

Reaction Equation



Specification

Specific Activity

U/mg protein > 35 units

Contaminants

ATPase	< 0.002%
Catalase	< 0.002%
Hexokinase	< 0.01%
Lactate oxidase	< 0.003%
Myokinase	< 0.01%
Phosphatase	< 0.0004%

Properties

pH stability	: pH 6.0 - 6.5 (30°C, 1 week)
Thermal stability	: ≤ 45°C (pH 6.5, 10 min)
Optimum pH	: pH 6.0 - 7.0
Optimum temp.	: 40°C
K _m value	: 1.47×10^{-1} mol/L (DL-Glycerol 3-phosphate)
Molecular weight	: 66 kDa (SDS-PAGE)

Assay Procedure

I Spectrophotometric Method

Wavelength : 505 nm, Light path length : 1 cm

Final volume : 3.04 mL, Temperature : 37°C

Pipette the following reagents into a cuvette

2.80 mL	K-phosphate buffer (0.375 mol/L, pH 6.4) containing DL-Glycerol 3-phosphate (0.43 mol/L)
0.10 mL	4-Aminoantipyrine (6 mmol/L)
0.10 mL	Phenol (0.21 mol/L)
0.02 mL	POD (1,000 U/mL Phenol method)
0.02 mL	rGPO (approx. 2.5 U/mL)

II Calculation

$$\frac{\Delta A/\text{min} \cdot V \cdot D}{13.2 \cdot d \cdot v} \times 2 = \text{U/mL}$$

Δ A/min = The change in absorbance at 505 nm/minute

V = Total volume of reaction mixture (3.04 mL)

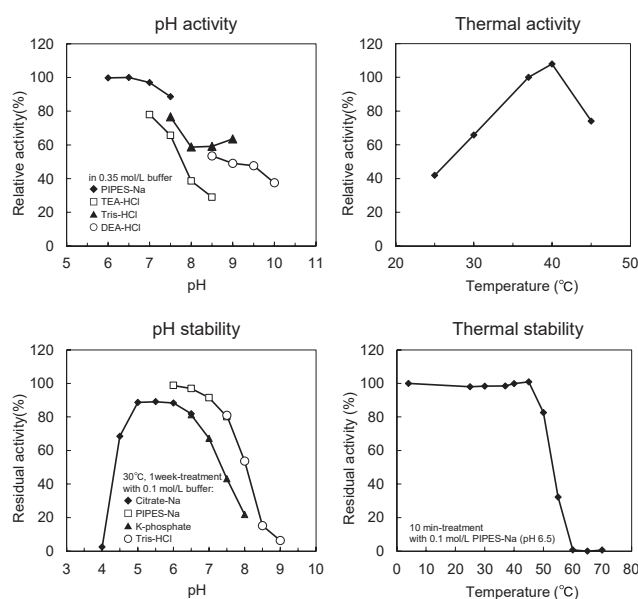
D = Enzyme dilution factor

13.2 = mmol/L extinction coefficient of quinoneimine dye (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
46899903	Bulk