

ENZYMES

BY

SORACHIM

Pyruvate Kinase from Microorganism

PYK-309P

SPECIFICATIONS

Product name	ATP : pyruvate 2-0-phosphotransferase
EC	2.7.1.40
Appearance	White amorphous powder, lyophilized
Activity	≥ 25 U/mg powder
NADH oxidase	≤ 0.01 %
Stability	Stable at - 20°C for at least 12 months
Molecular weight	63 kDa (SDS-PAGE)
Isoelectric point	5.7
Michaelis constant	8.7×10 ⁻⁴ M (ADP), 4.5×10 ⁻⁴ M (PEP)
Inhibitors	Not inhibited by NaN ₃
Optimum pH	6.2
Optimum temperature	50 °C
pH Stability	pH 5.5 - 9.0 (25 °C, 16 h)
Thermal stability	Below 60 °C (pH 7.5, 30 min)

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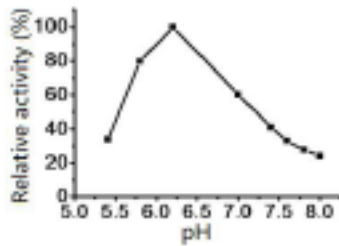


Fig. 1 Optimum pH

Buffer solution: pH 5.4-8.0,
triethanolamine-HCl
Enzyme concentration: 1 mg/mL

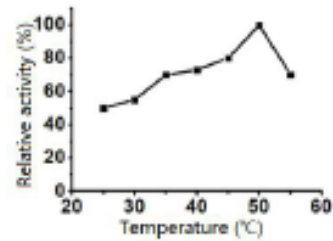


Fig. 2 Optimum temperature

Reaction in 50 mM triethanolamine-HCl
buffer, pH 6.2.
Enzyme concentration: 1 mg/mL

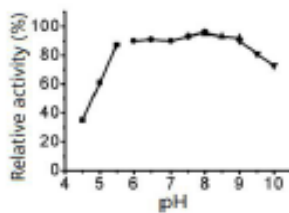


Fig. 3 pH Stability

25 °C, 16 h-treatment with 50 mM buffer
solution: pH 4.5-5.5, acetate; pH 6.0-8.0,
Na-phosphate; pH 8.0-9.0, Tris-HCl; pH
9.0-10.0, Glycine-NaOH.
Enzyme concentration: 1 mg/mL

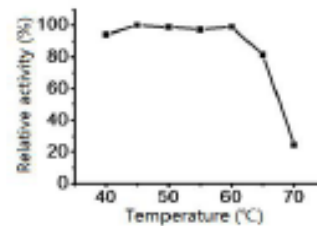


Fig. 4 Thermal stability

30 min-treatment with 50 mM Tris -HCl
buffer, pH 7.5.
Enzyme concentration: 1 mg/mL

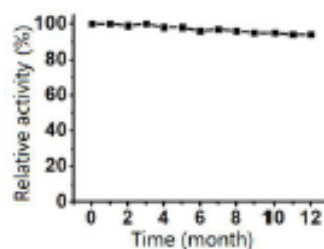


Fig.5 Storage stability (-20 °C)

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