Creative Enzymes®

Thermostable Bacterial Pyruvate Kinase, 80°C

Cat. No. CEGZ-6418

Lot. No. (See product label)

Introduction

Description	A recombinant bacterial pyruvate kinase with thermal stability up to 80°C and a defined nucleotide diphosphate preference profile.
Applications	For research and in vitro nucleotide triphosphate regeneration using phosphoenolpyruvate, including elevated-temperature kinase workflows.
Synonyms	PK; phosphoenolpyruvate kinase; phosphoenol transphosphorylase; fluorokinase; pyruvic kinase; pyruvate phosphotransferase; ATP:pyruvate 2-O-phosphotransferase

Product Information

Species	Bacterial
Source	Recombinant E. coli
Form	Liquid
EC Number	EC 2.7.1.40
CAS No.	9001-59-6
Molecular Weight	51.9 kDa
Thermal stability	Thermostable up to 80°C
Specificity	Substrate preference in the regeneration direction: ADP, dADP, GDP, dGDP >> UDP > TDP, CDP, dCDP. ATP, UTP, GTP, CTP, ITP, and dATP can act as phosphate donors in the reverse direction.
Substrates	ADP; dADP; GDP; dGDP; UDP; TDP; CDP; dCDP; phosphoenolpyruvate
Reaction	ATP + pyruvate = ADP + phosphoenolpyruvate
Notes	Recombinant protein produced in E. coli and purified by heat treatment and His-tag affinity chromatography. Optimal reaction time and enzyme concentration may vary depending on the substrate.
Protocol	70 mM Tris-HCl, pH 7.6 (at 50°C) 10 mM MgCl2 5 mM ADP 6 mM phosphoenolpyruvate 0.04 g/L enzyme 50°C, overnight
Usage	Research and in vitro use only.

Storage and Shipping Information

Storage	-20°C