

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