

Thermostable Prokaryotic UMP Kinase, 80°C

Cat. No. CEGZ-6403

Lot. No. (See product label)

Introduction

Description A recombinant prokaryotic UMP kinase with strong UMP preference, allosteric regulation, and thermal stability up to 80°C.

Applications For research and in vitro phosphorylation of UMP in pyrimidine nucleotide metabolism and high-temperature nucleotide conversion workflows.

Synonyms UMPK; uridylate kinase; uridine monophosphate kinase; ATP:UMP phosphotransferase

Product Information

Species Bacterial

Source Recombinant E. coli

Form Liquid

EC Number EC 2.7.4.22

CAS No. 9036-23-1

Molecular Weight 26.6 kDa

Thermal stability Thermostable up to 80°C

Specificity Primarily UMP; secondary substrate GMP and much lower activity toward CMP. Inhibited by UTP and activated by GTP.

Activators GTP

Inhibitors UTP

Substrates ATP; UMP; GMP; CMP

Reaction $\text{ATP} + \text{UMP} = \text{ADP} + \text{UDP}$

Notes Recombinant protein produced in E. coli and purified by heat treatment and His6-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 UMP 6 mM ATP 0.04 g/L enzyme 50°C, overnight

Usage Research and in vitro use only.

Storage and Shipping Information

Storage -20°C