Creative Enzymes®

Native Phosphofructokinase from Thermophillic bacteria

Cat. No. DIA-403

Lot. No. (See product label)

Introduction

Description	Phosphofructokinase is a kinase enzyme that phosphorylates fructose 6-phosphate in glycolysis. The enzyme-catalysed transfer of a phosphoryl group from ATP is an important reaction in a wide variety of biological processes. One enzyme that utilizes this reaction is phosphofructokinase (PFK), which catalyses the phosphorylation of fructose-6-phosphate to fructose-1,6-bisphosphate, a key regulatory step in the glycolytic pathway. PFK exists as a homotetramer in bacteria and mammals (where each monomer possesses 2 similar domains) and as an octomer in yeast (where there are 4 alpha-(PFK1) and 4 beta-chains (PFK2), the latter, like the mammalian monomers, possessing 2 similar domains). This protein may use the morpheein model of allosteric regulation.
Applications	Diagnostic tests
Synonyms	PFKWII; EC 2.7.1.11; PFK; phosphofructokinase; 6-phosphofructokinase; Phosphofructokinase I; Phosphohexokinase

Product Information

Source	Thermophillic bacteria
Form	Frozen Liquid
EC Number	EC 2.7.1.11
CAS No.	9001-80-3
Optimum pH	10.5
Thermal stability	100% stability after 1 hour at 80°C
Buffer	20 mM Tris-HCl (pH 7.5), 20 mM KCl
Unit Definition	One unit is defined as the amount of enzyme oxidizing 1 μmol of NADH (ε340=6.22 mM-1 cm-1) per 1 minute using fructose 6-phosphate as a substrate.

Storage and Shipping Information

Storage	Store at -20°C