

## Native Phosphofructokinase from Thermophilic 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

Thermophilic 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  $\mu$ mol of NADH ( $\epsilon_{340}=6.22$  mM<sup>-1</sup> cm<sup>-1</sup>) per 1 minute using fructose 6-phosphate as a substrate.

### Storage and Shipping Information

#### Storage

Store at -20°C