

## PFKM Protein, Human, Recombinant (His & GST)

### General Information

Synonyms:	ATP-PFK;PFK-1;PFK1;PFKA;PFKX;GSD7;phosphofructokinase, muscle;PPP1R122
Protein Construction:	A DNA sequence encoding the human PFKM (P08237-1) (Thr2-Val780) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P08237-1
Molecular Weight:	112.9 kDa (predicted); 113 kDa (reducing conditions)

### QC Testing

Biological Activity:	Kinase activity untested
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 20 mM Tris, 500 mM NaCl, pH 8.5, 10% glycerol.

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

Proteins are shipped with blue ice.

### Protein Background

PFK1, also known as PFKM, is a regulatory glycolytic enzyme. PFK1 converts fructose 6-phosphate and ATP into fructose 1,6-bisphosphate (through PFK-1), fructose 2,6-bisphosphate (through PFK-2) and ADP. It is a muscle-type isozyme. There are three phosphofructokinase isozymes in humans: muscle, liver and platelet. These isozymes function as subunits of the mammalian tetramer phosphofructokinase, which catalyzes the phosphorylation of fructose-6-phosphate to fructose-1,6-bisphosphate. Mutations in PFK1 gene have been related to glycogen storage disease type VII, also identified as Tarui disease.

Reference

Yamasaki T.,et al.,(1991), Structure of the entire human muscle phosphofructokinase-encoding gene: a two-promoter system. Gene 104:277-282.

Sharma P.M.,et al., (1989), Cloning and expression of a human muscle phosphofructokinase cDNA.Gene 77:177-183.

Nakajima H.,et al.,(1987), Cloning of human muscle phosphofructokinase cDNA.FEBS Lett. 223:113-116.

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