CREATIVE BIOMART®
Assay Kit

6-Phosphofructokinase Activity Assay Kit

Product Information

Cat.No. Kit-0678

Product Overview

6-Phosphofructokinase Activity Assay kit, PFK (phosphofructokinase) converts fructose-6-phosphate and ATP to fructose-diphosphate and ADP. The ADP in the presence of substrate and enzyme mix is converted to AMP and NADH, which reduces a colorless probe to a colored product with strong absorbance at 450 nm. PFK activity assay is simple, robust, and rapid and can detect phosphofructokinase activity less than 1 mU.

Description

Phosphofructokinase (PFK) is a key glycolytic enzyme and plays a major regulatory role during glycolysis. This enzyme is present in bacteria, plants and animals. There are 2 types of PFKs-PFK1 and PFK2. In the presence of ATP, PFK1 & PFK2 catalyzes the conversion of fructose-6-phosphate to fructose-1,6-diphosphate and fructose-2,6-diphosphate respectively and ADP. PFK has 3 major isoforms in mammals: PFK-M (muscle), PFK-L (liver) and PFK-P (platelet). In humans, PFK deficiency causes glycogen storage disease, also called Tarui"s disease, which is characterized by exercise-induced muscle weakness and cramps. On the other hand, increased PFK activity contributes to cancer cell proliferation and tumorigenicity. Early detection of abnormal phosphofructokinase activity is crucial for diagnosis, prediction and therapeutic strategy.

Applications

Functional Studies

Target Species

Reacts with: Mouse, Rat, HumanPredicted to work with: all Mammals

Storage

Store the kit at-20°C and protect from light. Please read the entire protocol before performing the assay. Avoid repeated freeze/thaw cycles. Warm all Buffers to room temperature before use. Briefly centrifuge all small vials prior to opening.

Kit Components

Tel: 1-631-559-9269 1-516-512-3133
Email:info@creative-biomart.org
Fax:1-631-938-8127
45-1 Ramsey Road, Shirley, NY 11967, USA

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ATP Orange 1 vialNADH Standard Yellow 1 vialPFK Assay Buffer WM 1 x 27mlPFK Developer Red 1 vialPFK Enzyme Mix Green 1 vialPFK Positive Control Purple 1 vialPFK Substrate Blue 1 vial

Compatible Sample Types

Adherent cells, Suspension cells, Tissue Homogenate

Assay time

1h 30m

Sensitivity

< 1 mU/well

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