CREATIVE BIOMART®
Assay Kit

PGI Colorimetric Assay Kit

Product Information

Cat.No.

Kit-0680

Product Overview

PGI Assay Kit (Colorimetric) is a quantitative colormetric determination of PGI at 450 nm.

Description

Phosphoglucose isomerase (PGI, EC 5.3.1.9) is an important housekeeping enzyme. PGI catalyzes the interconversion of glucose-6- phosphate to fructose-6-phosphate. PGI performs multiple functions & intracellularly plays key role in both glycolysis and gluconeogenesis. Extracellularly, PGI [also called Autocrine Motility Factor (AMF)] functions as a cytokine, which stimulates cell motility and is associated with tumor development and metastasis. In humans, PGI deficiency causes hemolytic anemia, whereas increased PGI activity is observed in many cancers such as gastrointestinal, kidney and breast cancer. Early detection of abnormal phosphoglucose isomerase activity is crucial for diagnosis, prediction and therapeutic strategy. In PGI Assay Kit (Colorimetric), PGI converts fructose-6-phosphate to glucose-6-phosphate; the glucose-6-phosphate is oxidized by glucose-6-phosphate dehydrogenase to form a product, which reacts with a colorless probe to give strong absorbance at 450 nm. The PGI assay is simple, sensitive and rapid and can detect phosphoglucose isomerase activity less than 0.1 mU/reaction.

Applications

Measurement of phosphoglucose isomerase activity in various tissues/cellsAnalysis of glucose metabolism and cell signaling in various cell typesScreening anti-diabetic drugs

Usage

For research use only (RUO)

Storage

Store kit at -20°C, protected from light. Warm all buffers to room temperature before use. Briefly centrifuge all small vials prior to opening.

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Kit Components

PGI Assay Buffer. Cap code: WM. 27 mlPGI Substrate (Lyophilized). Cap code: blue. 1 vialPGI Enzyme Mix (Lyophilized). Cap code: green. 1 vialPGI Developer (Lyophilized). Cap code: red. 1 vialNADH Standard (Lyophilized). Cap code: yellow. 1 vialPGI Positive Control (Lyophilized). Cap code: purple. 1 vial

Detection method Colorimetric

Compatible Sample Types

Attached Cell, Bacteria, Fish, Suspension Cell, Tissue, Yeast

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