

Pyruvate Kinase Assay Kit II

Product Information

Cat.No.

Kit-0693

Product Overview

Pyruvate Kinase Assay Kit is a quantitative colorimetric/fluorimetric determination of pyruvate kinase at OD570, FL530/585 nm.

Description

PYRUVATE KINASE (PK) is an enzyme involved in glycolysis. It catalyzes the transfer of a phosphate group from phosphoenolpyruvate (PEP) to ADP, yielding one molecule of pyruvate and one molecule of ATP. Pyruvate kinase deficiency, a genetic disease, is caused by a lack of pyruvate kinase and slows down the process of glycolysis. Pyruvate kinase is also involved in gluconeogenesis, a biochemical pathway in which the liver generates glucose from pyruvate and other substrates. Pyruvate Kinase Assay Kit provides a simple, direct and automation-ready procedure for measuring pyruvate kinase activity. In this assay PEP and ADP are catalyzed by pyruvate kinase to generate pyruvate and ATP. The color intensity of the reaction product at 570nm or fluorescence intensity at $\lambda_{ex}/\lambda_{em} = 530/590\text{nm}$ is directly proportional to the pyruvate generated by the Pyruvate Kinase in the sample.

Applications

Direct Assays: PK activity levels in plasma, serum, and tissue samples. Drug Discovery/Pharmacology: effects of drugs on PK activity

Usage

For research use only (RUO)

Storage

Store all kit components at -20 °C. Shelf life of six months after receipt.

Kit Components

Developer 12 mL Dye Reagent 120 μL Co-substrate 120 μL Pyruvate Standard (25 mM) 400 μL

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Detection method Colorimetric, Fluorimetric

Compatible Sample Types

Cell, Plasma, Serum, Tissue

Features & Benefits

Sensitive and accurate. Linear detection range in 96-well plate: 0.1 to 50 U/L for colorimetric assays and 0.01 to 2 U/L for fluorimetric assays run at 25°C for 30 min.
