CREATIVE BIOMART®
Assay Kit

Fluorescent Phosphate Assay Kit

Product Information

Cat.No. Kit-0689

Product Overview

Fluorescent Phosphate Assay Kit is used for assessing phosphate over a wide range of concentrations.

Description

Inorganic phosphate (Pi) is one of the most important ions in biological systems. It functions in a variety of roles.One of the most important roles is as a molecular switch, turning enzyme activity on and off through the mediation of the various protein kinases and phosphatases in biological systems. A highly sensitive assay is desired to monitor Pi in variety samples or monitor Pi changes during kinase and phosphatase reactions. The newly designed Fluorescent Phosphate Assay Kit provides a sensitive, easy, quick means of assessing phosphate over a wide range of concentrations. In the assay, inorganic phosphate reacted with maltose to produce glucose in the present of a special enzyme. The glucose is specifically oxidized to generate a product that reacts with the OxiRed probe to generate fluorescence (Ex/Em=535/587nm). The kit can be used to detect Pi in a variety of samples after reactions of ATPases, GTPases, 5''-nucleotidase, protein phosphatases, acid and alkaline phosphatases, and phosphorylase. Glucose background can be eliminated by doing a glucose control. Phosphate concentrations between 0.4 µM and 10 µM, with a lower limit of detection of approximately 40 pmol, can be directly determined.

Target Species

Mammals

Usage

For research use only (RUO)

Storage

Store kit at -20°C, protect from light. Allow reagents to warm to room temperature and briefly centrifuge vials before opening.

Kit Components

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1. Assay Buffer: 25 ml.2. OxiRed probe: 1 vial.3. Dimethylsulfoxide (DMSO; Dried): 0.4 ml.4. Maltose Converter: 1 vial.5. Glucose Developer: 1 vial.6. Substrate: 0.2 ml.7. Phosphate Standard (100mM): 50 µl.

Detection method Fluorometric

Compatible Sample Types

Biological Fluid, Cell Lysate, Culture Medium, Plasma, Serum, Tissue Lysate, Urine

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