CREATIVE BIOMART®
Assay Kit

2-Deoxyglucose Fluorometric Assay Kit

Product Information

Cat.No. Kit-0004

Product Overview

2-Deoxyglucose Assay Kit (Fluorometric) is a quantitative fluorometric determination of 2-deoxyglucose.

Description

Glucose uptake is an important biological process for studying cell signaling and glucose metabolism. Among many different methods available for measuring glucose uptake, 2-deoxyglucose (2-DG) has been widely used because of its structural similarity to glucose. As with glucose, 2-DG can be taken up by glucose transporters, and metabolized to 2-DG-6-phosphate (2-DG6P). 2-DG6P, however, cannot be further metabolized, and thus accumulates in the cells. The accumulated 2-DG6P is, therefore, directly proportional to 2-DG (or glucose) uptake by cells. In 2-Deoxyglucose Assay Kit (Fluorometric), the accumulated 2-DG6P is enzymatically oxidized and coupled to PicoProbe, which generates fluorescence in the presence of NADPH. This easy to use non-radioactive kit can detect glucose uptake as low as 50 pmol/well and can be used for a variety of cell types.

Applications

Measurement of glucose uptake in response to insulin, growth factors, cytokines, mitogens and nutrients, etc. Analysis of glucose metabolism and cell signaling in various cell types. Screening anti-diabetic drugs.

Target Species

Mammals

Usage

For research use only (RUO)

Storage

Store kit at -20°C, protected from light. Warm all Buffers to room temperature before use. Briefly

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centrifuge all small vials prior to opening.

Kit Components

Extraction Buffer. Cap code: NM. 17 mlNeutralization Buffer. Cap code: clear. 1 ml2-Deoxyglucose (2-DG, 10 mM). Cap code: purple. 1 ml2-DG Uptake Assay Buffer. Cap code: MW. 10 mlEnzyme Mix (Lyophilized). Cap code: green. 1 VialPicoProbeTM (in DMSO). Cap code: blue. 0.2 ml2-DG6P Standard (Lyophilized). Cap code: yellow. 1 Vial

Detection method Fluorometric

Compatible Sample Types

Cell Lysate

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