CREATIVE BIOMART®
Assay Kit

Glycerol Cell-Based Assay Kit

Product Information

Cat.No. Kit-0378

Product Overview

Glycerol Cell-Based Assay Kit is a colorimetric method for quantifying glycerol.

Description

In mammals, triglycerides are constantly synthesized from fatty acids and segregated into cytosolic lipid droplets, mainly in adipocytes, as the major energy storage depot. During fasting, triglycerides stored in adipose tissue and liver are hydrolyzed by hormone-sensitive lipase and adipose triglyceride lipase to produce free fatty acids and glycerol. Triglyceride/ fatty acid cycling is important in metabolic regulation and heat production, and is highly regulated by enzymes such as phosphenolpyruvate carboxykinase (PEPCK) and lipases. Quantitative changes in the triglyceride/fatty acid cycle have been related to the increased metabolic rate of cachectic patients with esophageal cancer and to metabolic syndrome.1,2 Abnormal triglyceride accumulation in the form of lipid droplets can occur in adipocytes and/ or hepatocytes of obese mammals. In vitro, dramatic lipid accumulation can be observed in well-differentiated 3T3-L1 cells, or HepG2 cells treated with steatosis-inducing compounds such as chloroquine. Triglycerides stored in these lipid droplets can be hydrolyzed into free fatty acids and glycerol which are subsequently released into the surrounding environment. The amount of glycerol released into the medium is proportional to the triglyceride/fatty acid cycling rate.

Usage

For research use only (RUO)

Storage

This kit will perform as specified if stored as directed and used before the expiration date indicated on the outside of the box.Glycerol Standard Solution -20°CFree Glycerol Assay Reagent (10X) -20°CChloroquine Positive Control (25 mM) -20°C

Kit Components

Glycerol Standard Solution 1 vialFree Glycerol Assay Reagent (10X) 2 vialsChloroquine Positive

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Control (25 mM) 1 vial

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