CREATIVE BIOMART®
Assay Kit

Lipolysis (3T3-L1) Fluorometric Assay Kit

Product Information

Cat

Kit-2218

Cat.No.

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Product Overview

Lipolysis is the hydrolysis of triglycerides within the cell into glycerol and free fatty acids. The glycerol and free fatty acids are then released into the bloodstream or culture media. Lipolysis occurs in essentially all cells, but is most abundant in white and brown adipose tissue. Deficiencies in lipolysis lead to increased intracellular lipid accumulation, resulting in abnormal cellular physiology, hyperlipidemia, and insulin resistance. Lipolysis can be induced by catecholamines and certain hormones. The kit includes the synthetic catecholamine, Isoproterenol, which activates β-adrenergic receptors. This leads to activation of adenylate cyclase, which catalyzes the conversion of ATP to cAMP. cAMP then serves as a second messenger to activate hormone-sensitive lipase, which hydrolyzes the triglycerides. This pathway can be inhibited by insulin. Lipolysis (3T3-L1) Fluorometric Assay kit is simple, easy-to-use & the most sensitive kit on the market. This assay measures glycerol released from 3T3-L1 cells as early as 1 hr. after induction of lipolysis. It is suitable for measuring trace amounts of glycerol from samples. In this assay, glycerol reacts with Enzyme Mix to form an intermediate that in turn reacts with Glycerol Developer & to generate the fluorescence product. The fluorescence intensity is directly proportional to the amount of glycerol. This assay kit can detect less than 20 pmol of Glycerol.

Applications

Measurement of lipolysis in 3T3-L1 cells or adipocytes;
Screening compounds that influence lipolysis, mechanistic studies, and studies on metabolic dysfunctions.

Storage

-20°C

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Assay Kit

Lipolysis (3T3-L1) Fluorometric Assay Kit

Shipping
Gel Pack
Size
100 assays
Kit Components
Lipolysis Assay Buffer; Lipolysis Wash Buffer; Glycerol Assay Buffer; Glycerol Probe (in DMSO, Anhydrous); Glycerol Enzyme Mix (Lyophilized); Glycerol Standard (100 mM); Isoproterenol (10 mM)
Detection method Fluorescence (Ex/Em = 535/587 nm)
Features & Benefits
Simple, rapid & convenient; The assay can detect less than 20 pmol of glycerol.

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