CREATIVE BIOMART®
Assay Kit

Total Phosphodiesterase Activity Assay Kit (Fluorometric)

Product Information

Cat

Kit-1115

Cat.No.

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Description

Phosphodiesterase (PDE) is a family of enzymes that cleave a phosphodiester bond. These include cyclic nucleotide phosphodiesterases, phospholipase C and D, RNases, DNases and some restriction endonucleases. Phosphodiesterases are important enzymes used for a variety of biological functions including metabolism of second messenger molecules like cAMP / cGMP (therefore, regulation of their intracellular levels). PDE activity is responsible for degradation of mRNA after it had been translated to protein and of DNA during apoptosis. Some PDE isoforms such as PDE 5 and PDE 11 are therapeutic targets because of their role in the cardiovascular system and tumor formation respectively. PDE assay kit is a fluorometric plate-based assay for kinetic measurement of total phosphodiesterase activity. It is based on the cleavage of a coumarin based synthetic substrate by phosphodiesterases to generate a product, which fluoresces at Ex/Em= 370/450 nm. It does not rely on the quantification of phosphate released by phosphodiesterase action, like other traditional methods currently in use. Therefore, sample background is negligible, and does not interfere with the assay. The substrate is specific for phosphodiesterases and is not cleaved by enzymes that act on carboxyl esters or by phosphatases. This assay can detect as low as 0.25 μU of total PDE.

Applications

Detection and quantificiation of total phosphodiesterase activity in biological samples

Storage

-20°C

Shipping

Gel Pack

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Size	
100 assays	
Kit Components	
PDE Assay Buffer; PDE Substrate; Coumarin Standard (50 μM); PDE Positive Control	
Target Species	
Mammalian	
Detection method	Fluorescence(Ex/Em 370/450 nm)
Features & Benefits	
Simple, highly sensitive, high-throughput compatible; Detection and quantificiation of total phosphodiesterase activity in biological samples; This assay has a detection sensitivity as low as 0.25 μU.	

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