

PKC Kinase Activity Assay Kit ab139437

[31 References](#) [4 Images](#)

Overview

Product name	PKC Kinase Activity Assay Kit			
Detection method	Colorimetric			
Precision	Intra-assay			
	Sample	n	Mean	SD
	Sample			CV%
				< 10%
	Inter-assay			
	Sample	n	Mean	SD
	Sample			CV%
				< 10%
Sample type	Adherent cells, Suspension cells, Tissue Extracts, Purified protein			
Assay type	Enzyme activity			
Assay time	4h 30m			
Product overview	<p>PKC Kinase Activity Assay Kit (ab139437) is a non-radioactive assay providing a safe, rapid and reliable method for the screening of inhibitors or activators of PKC and for quantitating the activity of PKC in purified or partially purified enzyme preparations. This kit is based on a solid phase enzyme-linked immuno-absorbent assay (ELISA) that utilizes a specific synthetic peptide as a substrate for PKC and a polyclonal antibody that recognizes the phosphorylated form of the substrate. The assay is designed for the analysis of PKC activity in the solution phase. For the measurement of PKC in partially purified, purified, or crude enzyme preparations from any species.</p> <p>The kit offers the following advantages:</p> <ol style="list-style-type: none">1. Safe - non-radioactive measurement of kinase activity.2. Flexible - kinetic and end-point options available.3. Fast - results in < 4.5 hours.4. Efficient - only 30 µl diluted sample needed per well.			
Platform	Microplate reader			

Properties

Storage instructions

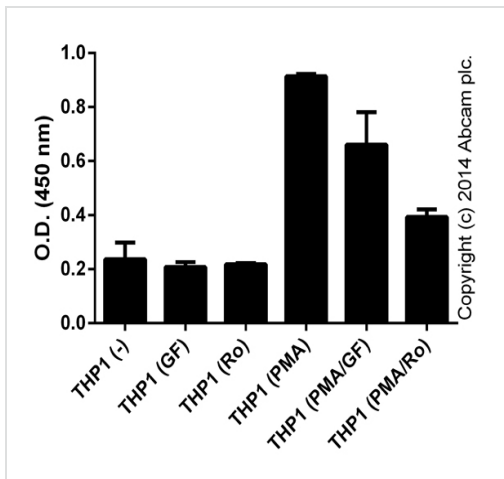
Please refer to protocols.

Components	1 x 96 tests
20X Wash Buffer	1 x 30ml
Active PKC	1 x 30µl
Antibody Dilution Buffer	1 x 10ml
Anti-Rabbit IgG: HRP Conjugate	1 x 20µl
ATP	1 x 2mg
Kinase Assay Dilution Buffer	1 x 10ml
PKC Phosphospecific Substrate Antibody	1 x 5ml
PKC Substrate Microtiter Plate	1 unit
Stop Solution 2	1 x 10ml
TMB Substrate	1 x 10ml

Relevance

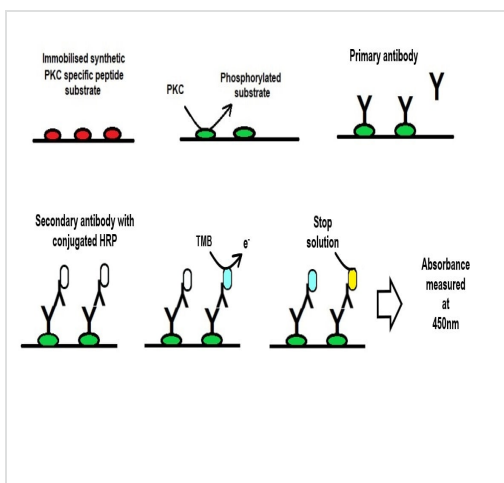
Protein Kinase C (PKC) isoforms are serine/threonine kinases involved in signal transduction pathways that govern a wide range of physiological processes including differentiation, proliferation, gene expression, brain function, membrane transport and the organization of cytoskeletal and extracellular matrix proteins. Increasing evidence from studies using in vitro and in vivo systems points to PKC as a key regulator of critical cell cycle transitions, including cell cycle entry and exit and the G1 and G2 checkpoints. PKC-mediated control of these transitions can be negative or positive, depending on the timing of PKC activation during the cell cycle and on the specific PKC isozymes involved. There have been at least 12 different PKC isoforms identified in humans to date, including alpha, beta I, beta II, gamma, delta, epsilon, zeta, eta, theta, iota, lambda, and mu.

Images



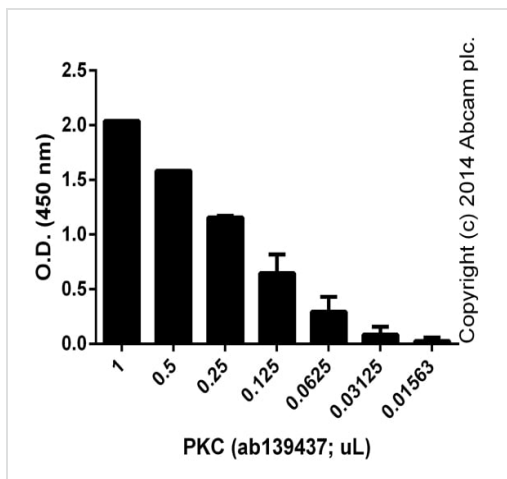
Functional assay: PKC Kinase Activity Assay Kit
(ab139437)

1.5 x e7 THP-1 cells were incubated with 100 nM GF109203X (GF; [ab144264](#)) or Ro31-8220 mesylate (Ro; [ab120374](#)) for 30 minutes prior to activation with 10 $\mu\text{g} \times \text{mL}^{-1}$ PMA (Sigma) for 4 hours. Control cells were left without inhibitors or PMA. Cells were lysed in 1 mL of lysis buffer, and 30 μL were tested for PKC activity (duplicates; \pm SD).



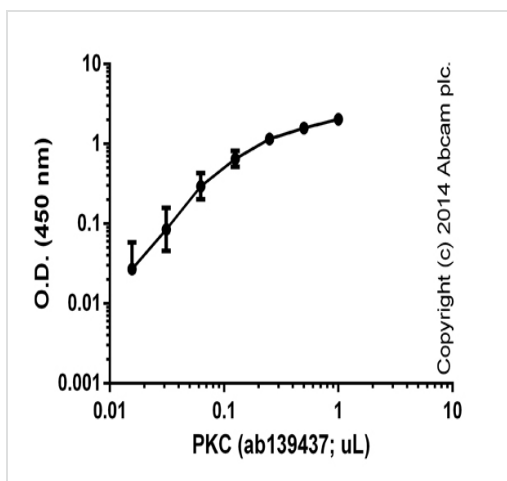
schematic diagram of the assay

This image is courtesy of Fitzpatrick, Daniel P. (2020) "A Mechanistic Study on the Non-genotoxic Carcinogenicity of the Food Contaminant Semicarbazide," Sure-J: Science Undergraduate Research Journal: Vol. 2: Iss. 1, Article 2



Titration of ab139437 (duplicates; +/- SD).

Functional assay: PKC Kinase Activity Assay Kit
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Signal from active PKC with background signal subtracted
(duplicates; +/- SD).

Functional assay: PKC Kinase Activity Assay Kit
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