

PKC Isoform Antibody Sampler Kit

Cat# AK0244

Upon receipt, store at -20°C. Avoid freeze/thaw cycles.

PRODUCT DESCRIPTION

Activation of protein kinase C (PKC) is one of the earliest events in a cascade that controls a variety of cellular responses, including secretion, gene expression, proliferation, and muscle contraction. PKC isoforms belong to three groups based on calcium dependency and activators. Classical PKCs are calcium-dependent via their C2 domains and are activated by phosphatidylserine (PS), diacylglycerol (DAG), and phorbol esters (TPA, PMA) through their cysteine-rich C1 domains. Both novel and atypical PKCs are calcium-independent, but only novel PKCs are activated by PS, DAG, and phorbol esters. Members of these three PKC groups contain a pseudo-substrate or autoinhibitory domain that binds to substrate-binding sites in the catalytic domain to prevent activation in the absence of cofactors or activators. Control of PKC activity is regulated through three distinct phosphorylation events. Phosphorylation occurs *in vivo* at Thr500 in the activation loop, at Thr641 through autophosphorylation, and at the carboxy-terminal hydrophobic site Ser660. Atypical PKC isoforms lack hydrophobic region phosphorylation, which correlates with the presence of glutamic acid rather than the serine or threonine residues found in more typical PKC isoforms. The enzyme PDK1 or a close relative is responsible for PKC activation. A recent addition to the PKC superfamily is PKC μ (PKD), which is regulated by DAG and TPA through its C1 domain. PKD is distinguished by the presence of a PH domain and by its unique substrate recognition and Golgi localization. PKC-related kinases (PRK) lack the C1 domain and do not respond to DAG or phorbol esters. Phosphatidylinositol lipids activate PRKs, and small Rho-family GTPases bind to the homology region 1 (HR1) to regulate PRK kinase activity.

PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
A340641	PRKCA Polyclonal Antibody	20 μ L	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
A340643	PKC zeta Polyclonal Antibody	20 μ L	WB, IHC, IF, ELISA	Human, Mouse, Rat, Monkey	Rabbit
A340644	PRKD1 Polyclonal Antibody	20 μ L	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
A340642	PKC delta Polyclonal Antibody	20 μ L	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit

A1013s	Goat Anti-Rabbit IgG (H+L) (peroxidase/HRP conjugated)	120μL	WB, ELISA	Rabbit	Goat
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PRODUCT USE LIMITATION

These products are intended for research use only.