BP7168

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Polyclonal Antibody to PKCn [pS674] Phosphospecific Antibody

Catalog No.: BP7168

Quantity: 0.1 ml

Concentration: 0.5 mg/ml

Host: Rabbit

Immunogen: The antiserum was produced against a chemically synthesized phosphopeptide derived from a region of human PKCn that contains serine 674. The sequence is conserved in mouse and rat.

Applications: The antibody has been used for Western blotting. For Western blotting applications, we recommend using the antibody at 0.35-1.0 µg/mL. At 0.50 µg/mL, the dilution provides 100 mL working solution, which at 10 mL/blot allows 10 blots to be performed. Positive controls used: Jurkat cells treated with PMA, a phorbol ester. Other applications not tested. Optimal dilutions of this antibody are dependent on conditions and should be determined by the user.
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Specificity: Protein Kinase Cn (PKCn) is an 80 kDa member of the novel group (nPKCs: sensitive to diacylglycerol, phosphotidylserine and phorbol esters) of the PKC family of serine/threonine kinases that are involved in a wide range of physiological processes including mitogenesis, cell survival, transcriptional regulation and tumor promotion. PKCn has been shown to be involved in the cell cycle as ectopic expression results in elevated expression of cyclins D and E, and its association with the cyclinE/cdk2/p21 complex inhibits cdk2 kinase activity, leading to G1 arrest. PKCn is also involved in mediating FGF and PDGF ability to stimulate IL-6 production, and PKCµ modulation of ERK and JNK signaling pathways. The activation loop threonine (threonine 512 in PKCn) of novel PKCs is phosphorylated by phosphoinositide-dependent kinase-1 (PDK1) and is necessary for the autophosphorylation of serine 674 in the carboxy-terminus of PKCn, a step that may play a role in mediating PKCn signaling events. Reacts with human PKCn. Mouse and rat (100% homologous) PKCn have not been tested, but are expected to react. The peptide competition data (see Figure) suggest that this antibody will cross-react with PKCα [pS657] and βI [pS661] (58% homologous).

Storage: Store at 4°C short term only. Aliquot and store at -20°C to -80°C for longer. Avoid repeated freezing and thawing. Shelf life: one year from despatch.

General Readings: Brandlin, I., et al. (2002) Protein kinase C (PKC)eta-mediated PKC mu activation modulates ERK and JNK signal pathways. J. Biol. Chem. 277(8):6490-6496.
Thabard, W., et al. (2001) Protein kinase C delta and eta isoenzymes control the shedding of the interleukin 6 receptor alpha in myeloma cells. Biochem. J. 358(Pt 1):193-200.

Fima, E., et al. (2001) PKCeta enhances cell cycle progression, the expression of G1 cyclins and p21 in MCF-7 cells. Oncogene 20(46):6794-6804.
Kashiwagi, M., et al. (2000) PKCeta associates with cyclin E/cdk2/p21 complex, phosphorylates p21 and inhibits cdk2 kinase in keratinocytes. Oncogene 19(54):6334-6341.
Waldron, R.T., et al. (1999) The pleckstrin homology domain of protein kinase D interacts preferentially with the eta isoform of protein kinase C. J. Biol. Chem. 274(14):9224-9230.
Fima, E., et al. (1999) Expression of PKCeta in NIH-3T3 cells promotes production of the proinflammatory cytokine interleukin-6. Eur. Cytokine Netw. 10(4):491-500.
Schonwasser, D.C., et al. (1998) Activation of the mitogen-activated protein kinase/extracellular signal-regulated kinase pathway by conventional, novel, and atypical protein kinase C isotypes. Mol. Cell. Biol. 18(2):790-798.
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