PKC (α,β,γ)

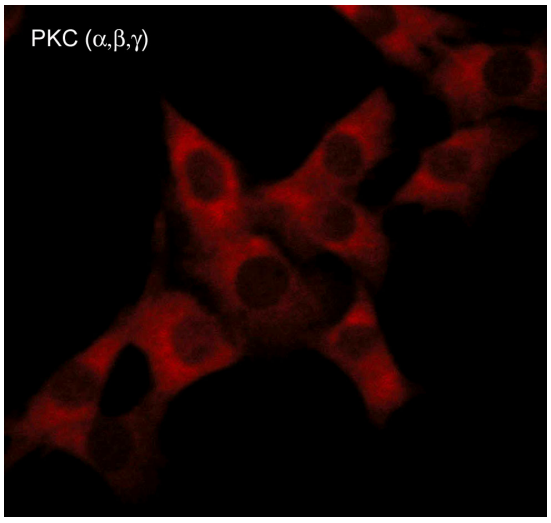
Cat. #	PM1101
Host	Mouse Monoclonal IgG1
Size	100 µl

Background:

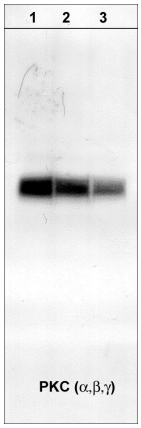
The Protein Kinase C (PKC) family of homologous serine/threonine protein kinases is involved in a number of processes such as growth, differentiation, and cytokine secretion. At least eleven isozymes have been described. PKC consists of a single polypeptide chain containing four conserved regions (C) and five variable regions (V). The N-terminal half interacts with PKC activators Ca^{2+}, phospholipid, diacylglycerol, or phorbol ester, while the C-terminal half contains the catalytic domain. The conventional PKC subfamily (α, βI, βII, and γ) is regulated by both Ca^{2+} and diacylglycerol. The PKC pathway represents a major signal transduction system that is activated following ligand-stimulation of transmembrane receptors by hormones, neurotransmitters, and growth factors. The phosphorylation of multiple sites in conventional PKCs regulates their activity. In mast cells, FcεRI stimulation leads to phosphorylation of tyrosine 658 and 662 of PKCβI and PKCα, respectively. This phosphorylation requires autophosphorylation of serine 657 and 661 in these respective kinases.

References

Kawakami et al. (2003) Proc. Natl. Acad. Sci. USA 100:9470-9475.
Nishizuka, Y. (1988) Nature 334:661.



Immunocytochemical labeling of PKC in mouse C2C12. The cells were labeled with mouse monoclonal PKC (α,β,γ), then the antibody was detected using appropriate secondary antibodies conjugated to Cy3.



Western blot analysis of PKC isoforms in neonatal rat brain lysate. The rat brain blot was probed with anti-PKC (α,β,γ) at decreasing dilutions:

Lane 1 = 1:250
Lane 2 = 1:500
Lane 3 = 1:1000

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Rev 4/27/2009

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Cat. #	PM1101
Host	Mouse Monoclonal IgG1
Size	100 µl

Immunogen:

Clone (M110) was generated from a recombinant human PKCγ that included amino acids residues 499-697.

Buffer and Storage:

Mouse monoclonal antibody purified with protein A chromatography is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at –20°C. Do not aliquot. Stable for 1 year.

Applications:

WB	1:1000	ICC	1:100
ELISA	1:2000		
IP	1:100		

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, PBS, 0.04% Tween20 for 1hour at room temperature.

Specificity:

This antibody detects 80-82kDa* proteins corresponding to the molecular mass of PKCα, PKCβ, and PKCγ on SDS-PAGE immunoblots of neonatal rat brain lysates. Similar results were observed in human and mouse lysates. Immunoprecipitation experiments with various PKC isoforms demonstrated this antibody detects PKCα, PKCβ, and PKCγ, but not other PKC isoforms expressed in rat brain lysate.

*All molecular weights (MW) are confirmed by comparison to Bio-Rad Rainbow Markers and to western blot mobilities of known proteins with similar MW.

Related Products:

PP1091 PKCα (Ser-657/Tyr-658), phospho-specific Rabbit Polyclonal
PX1095 phospho-PKCα (Ser-657/Tyr-658) Peptide
PM2371 PKCα (Central region) Mouse Monoclonal
PM2421 PKCδ (N-terminal region) Mouse Monoclonal
PM2171 PKCθ (N-terminal region) Mouse Monoclonal

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