10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

PKC nu Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7025A

Product Information

Application	WB, IHC-P, E
Primary Accession	O94806
Reactivity	Mouse, Human
Predicted	Rat, Bovine, Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	100471
Antigen Region	352-384

Additional Information

Gene ID	23683
Other Names	Serine/threonine-protein kinase D3, Protein kinase C nu type, Protein kinase EPK2, nPKC-nu, PRKD3, EPK2, PRKCN
Target/Specificity	This PKC-nu antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 352-384 amino acids from human PKC-nu.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PKC nu Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PRKD3
Synonyms	EPK2, PRKCN
Function	Converts transient diacylglycerol (DAG) signals into prolonged physiological effects, downstream of PKC. Involved in resistance to oxidative stress (By

similarity).

Cellular Location Cytoplasm. Membrane. Note=Translocation to the cell membrane is required for kinase activation

Tissue Location Ubiquitous.

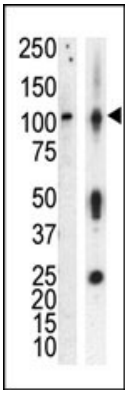
Background

Protein kinase C (PKC) is a family of serine- and threonine-specific protein kinases that can be activated by calcium and second messenger diacylglycerol. PKC family members phosphorylate a wide variety of protein targets and are known to be involved in diverse cellular signaling pathways. PKC also serve as major receptors for phorbol esters, a class of tumor promoters. Each member of the PKC family has a specific expression profile and is believed to play distinct roles in cells. PKC nu is one of the PKC family members. This kinase can be activated rapidly by the agonists of G protein-coupled receptors. It resides in both cytoplasm and nucleus, and its nuclear accumulation is found to be dramatically enhanced in response to its activation. This kinase can also be activated after B-cell antigen receptor (BCR) engagement, which requires intact phopholipase C gamma and the involvement of other PKC family members.

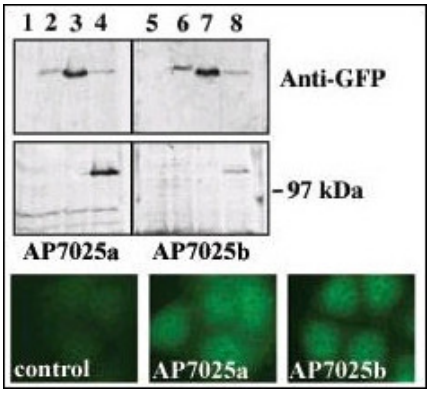
References

Yeaman, C., et al., Nat. Cell Biol. 6(2):106-112 (2004).
Rey, O., et al., J. Biol. Chem. 278(26):23773-23785 (2003).
Matthews, S.A., et al., J. Biol. Chem. 278(11):9086-9091 (2003).
Bennasser, Y., et al., Virology 303(1):174-180 (2002).
Bennasser, Y., et al., FASEB J. 16(6):546-554 (2002).

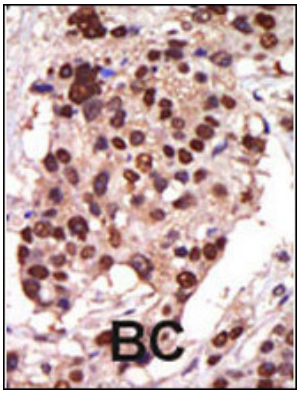
Images



Western blot analysis of anti-PKCnu Pab (Cat. #AP7025a) in lysate of HL60 cells stimulated with PMA (lane A) and mouse brain tissue lysate (lane B). PKCnu (arrow) was detected using purified Pab. Secondary HRP-anti-rabbit was used for signal visualization with chemiluminescence.



Upper panel, western blot analysis of GFP fusion protein expression in Panc-1 cells by using an anti-GFP antibody. Lanes 1 and 5: non-transfected cells; lanes 2 and 6: GFP-PKD-transfected cells; lanes 3 and 7: GFP-PKD2-transfected cells; lanes 4 and 8: GFP-PKD3 transfected cells. Center panel, western blot analysis of GFP fusion protein expression in Panc-1 cells by using PKD3 N-term (AP7025a) and C-term (AP7025b) antibodies. Lower panel, indirect immunofluorescence analysis of GFP-PKD3 fusion protein expression in Panc-1 cells by using AP7025a and AP7025b antibodies. Data courtesy of Dr. Osvaldo Rey, University of California Los Angeles.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

Citations

- Protein kinase D3 (PKD3) contributes to prostate cancer cell growth and survival through a PKCepsilon/PKD3 pathway downstream of Akt and ERK 1/2.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.