

**Product Name: PKC  $\zeta$  (phospho Thr410) Rabbit Polyclonal Antibody**  
**Catalog #: APRab05264**

---

## Summary

<b>Production Name</b>	PKC $\zeta$ (phospho Thr410) Rabbit Polyclonal Antibody
<b>Description</b>	Rabbit Polyclonal Antibody
<b>Host</b>	Rabbit
<b>Application</b>	WB,IHC,IF,ELISA
<b>Reactivity</b>	Human,Mouse,Rat

## Performance

<b>Conjugation</b>	Unconjugated
<b>Modification</b>	Phospho Antibody
<b>Isotype</b>	IgG
<b>Clonality</b>	Polyclonal
<b>Form</b>	Liquid
<b>Storage</b>	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
<b>Buffer</b>	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
<b>Purification</b>	Affinity purification

## Immunogen

<b>Gene Name</b>	PRKCZ
<b>Alternative Names</b>	PRKCZ; PKC2; Protein kinase C zeta type; nPKC-zeta
<b>Gene ID</b>	5590.0
<b>SwissProt ID</b>	Q05513.The antiserum was produced against synthesized peptide derived from human PKC zeta around the phosphorylation site of Thr410. AA range:376-425

## Application

<b>Dilution Ratio</b>	WB 1:500 - 1:2000. IHC 1:100 - 1:300. IF 1:200 - 1:1000. ELISA: 1:20000. Not yet tested in other applications.
<b>Molecular Weight</b>	70kD

**Product Name: PKC  $\zeta$  (phospho Thr410) Rabbit  
Polyclonal Antibody  
Catalog #: APRab05264**

---

## Background

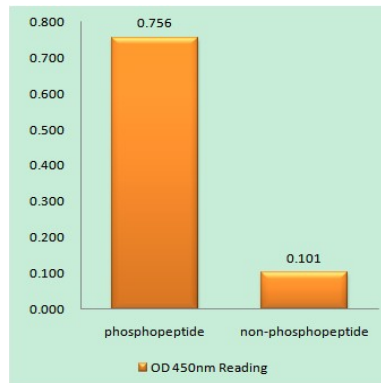
Protein kinase C (PKC) zeta is a member of the PKC family of serine/threonine kinases which are involved in a variety of cellular processes such as proliferation, differentiation and secretion. Unlike the classical PKC isoenzymes which are calcium-dependent, PKC zeta exhibits a kinase activity which is independent of calcium and diacylglycerol but not of phosphatidylserine. Furthermore, it is insensitive to typical PKC inhibitors and cannot be activated by phorbol ester. Unlike the classical PKC isoenzymes, it has only a single zinc finger module. These structural and biochemical properties indicate that the zeta subspecies is related to, but distinct from other isoenzymes of PKC. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008],catalytic activity:ATP + a protein = ADP + a phosphoprotein.,domain:The C1 domain does not bind the diacylglycerol (DAG),.domain:The OPR domain mediates mutually exclusive interactions with SQSTM1 and PARD6B.,enzyme regulation:Phosphatidylinositol 3,4,5-trisphosphate might be a physiological activator. Two specific sites, Thr-410 (activation loop of the kinase domain) and Thr-560 (turn motif), need to be phosphorylated for its full activation.,function:PKC is activated by diacylglycerol which in turn phosphorylates a range of cellular proteins. PKC also serves as the receptor for phorbol esters, a class of tumor promoters. Subunit of a quaternary complex that plays a central role in epithelial cell polarization.,function:This is a calcium-independent, phospholipid-dependent, serine- and threonine-specific enzyme.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PKC subfamily.,similarity:Contains 1 AGC-kinase C-terminal domain.,similarity:Contains 1 OPR domain.,similarity:Contains 1 phorbol-ester/DAG-type zinc finger.,similarity:Contains 1 protein kinase domain.,subcellular location:In the retina, localizes in the terminals of the rod bipolar cells (By similarity). Associates with endosomes.,subunit:Forms a ternary complex with SQSTM1 and KCNAB2. Forms another ternary complex with SQSTM1 and GABRR3. Forms a complex with SQSTM1 and MAP2K5 (By similarity). Interacts with PARD6A, PARD6B, PARD6G and SQSTM1. Part of a complex with PARD3, PARD6A or PARD6B or PARD6G and CDC42 or RAC1. Interacts with ADAP1/CENTA1. Forms a ternary complex composed of SQSTM1 and PAWR. Interacts directly with SQSTM1 (Probable). Interacts with IKBKB.,tissue specificity:Expressed in brain, and to a lesser extent in lung, kidney and testis.,

## Research Area

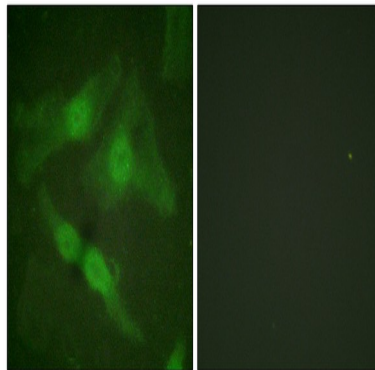
Regulation\_Microtubule; Regulation of Actin Dynamics; Stem cell pathway; Insulin Receptor; PI3K/Akt; B Cell Receptor; AMPK

## Image Data

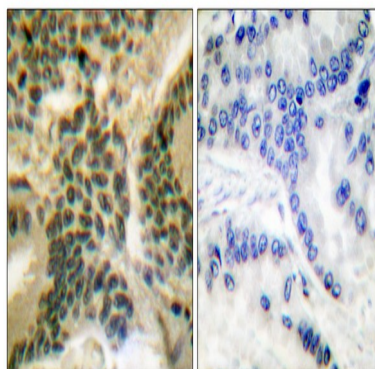
**Product Name: PKC  $\zeta$  (phospho Thr410) Rabbit Polyclonal Antibody**  
**Catalog #: APRab05264**



Enzyme-Linked Immunosorbent Assay (Phospho-ELISA) for Immunogen Phosphopeptide (Phospho-left) and Non-Phosphopeptide (Phospho-right), using PKC zeta (Phospho-Thr410) Antibody

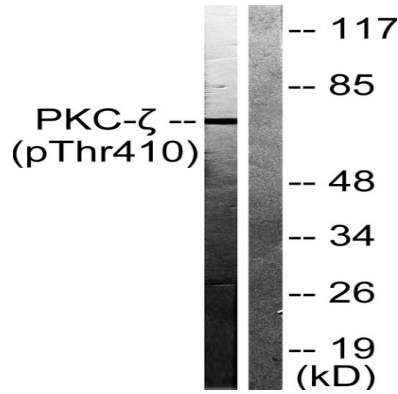


Immunofluorescence analysis of HeLa cells, using PKC zeta (Phospho-Thr410) Antibody. The picture on the right is blocked with the phospho peptide.

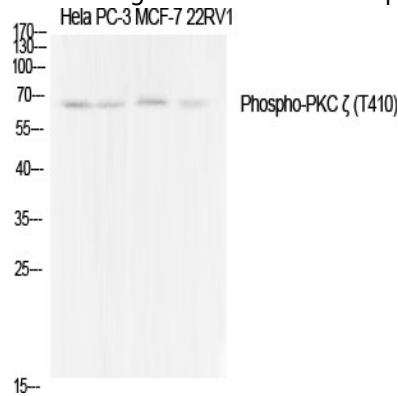


Immunohistochemistry analysis of paraffin-embedded human lung carcinoma, using PKC zeta (Phospho-Thr410) Antibody. The picture on the right is blocked with the phospho peptide.

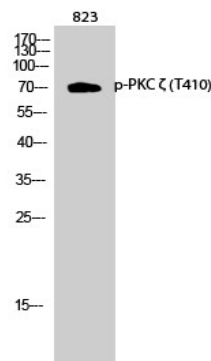
**Product Name: PKC  $\zeta$  (phospho Thr410) Rabbit Polyclonal Antibody**  
**Catalog #: APRab05264**



Western blot analysis of lysates from NIH/3T3 cells treated with PMA 125ng/ml 30', using PKC zeta (Phospho-Thr410) Antibody. The lane on the right is blocked with the phospho peptide.



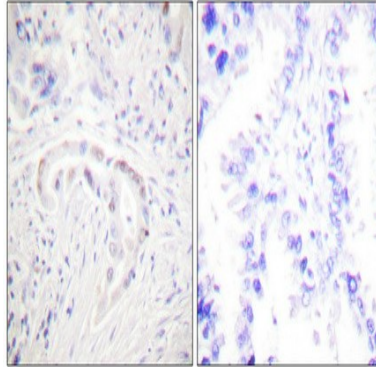
Western Blot analysis of various cells using Phospho-PKC  $\zeta$  (T410) Polyclonal Antibody diluted at 1: 1000



Western Blot analysis of 823 cells using Phospho-PKC  $\zeta$  (T410) Polyclonal Antibody diluted at 1: 1000

**Product Name: PKC  $\zeta$  (phospho Thr410) Rabbit  
Polyclonal Antibody  
Catalog #: APRab05264**

---



Immunohistochemical analysis of paraffin-embedded Human lung cancer. Antibody was diluted at 1:100 (4°, overnight) . High-pressure and temperature Tris-EDTA, pH 8.0 was used for antigen retrieval. Negative control (right) obtained from antibody was pre-absorbed by immunogen peptide.

### **Note**

For research use only.