

PKC ζ (phospho Thr410) Polyclonal Antibody

Catalog No :	YP0229
Reactivity :	Human;Mouse;Rat
Applications :	WB;IHC;IF;ELISA
Target :	PKC ζ
Fields :	>>Rap1 signaling pathway;>>Chemokine signaling pathway;>>Sphingolipid signaling pathway;>>Endocytosis;>>Axon guidance;>>Hippo signaling pathway;>>Tight junction;>>Platelet activation;>>Insulin signaling pathway;>>Relaxin signaling pathway;>>Type II diabetes mellitus;>>Insulin resistance;>>AGE-RAGE signaling pathway in diabetic complications;>>Human papillomavirus infection;>>Diabetic cardiomyopathy;>>Fluid shear stress and atherosclerosis
Gene Name :	PRKCZ
Protein Name :	Protein kinase C zeta type
Human Gene Id :	5590
Human Swiss Prot No :	Q05513
Mouse Gene Id :	18762
Mouse Swiss Prot No :	Q02956
Rat Gene Id :	25522
Rat Swiss Prot No :	P09217
Immunogen :	The antiserum was produced against synthesized peptide derived from human PKC zeta around the phosphorylation site of Thr410. AA range:376-425
Specificity :	Phospho-PKC ζ (T410) Polyclonal Antibody detects endogenous levels of PKC ζ protein only when phosphorylated at T410. Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Formulation :	Polyclonal, Rabbit,IgG
Dilution :	WB 1:500 - 1:2000. IHC 1:100 - 1:300. IF 1:200 - 1:1000. ELISA: 1:20000. Not yet tested in other applications.
Purification :	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Concentration :	1 mg/ml
Storage Stability :	-15°C to -25°C/1 year(Do not lower than -25°C)
Observed Band :	70kD
Cell Pathway :	Regulation_Microtubule; Regulation of Actin Dynamics; Stem cell pathway; Insulin Receptor; PI3K/Akt; B Cell Receptor; AMPK
Background :	<p>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],</p>
Function :	<p>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</p>
Subcellular Location :	Cytoplasm . Endosome . Cell junction . Membrane ; Peripheral membrane protein . In the retina, localizes in the terminals of the rod bipolar cells (By similarity). Associates with endosomes (PubMed:9566925). Presence of KRIT1, CDH5 and RAP1B is required for its localization to the cell junction (PubMed:7597083). Colocalizes with VAMP2 and WDFY2 in intracellular vesicles

(PubMed:17313651). Transiently translocates to the membrane of CA1 hippocampal cells in response to the induction of long term potentiation (By similarity). .; [Isoform 2]: Cytoplasm .

Expression : Expressed in brain, and to a lesser extent in lung, kidney and testis.

Tag : orthogonal

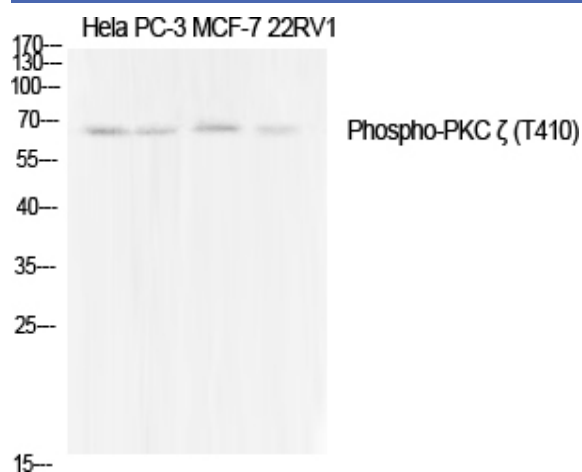
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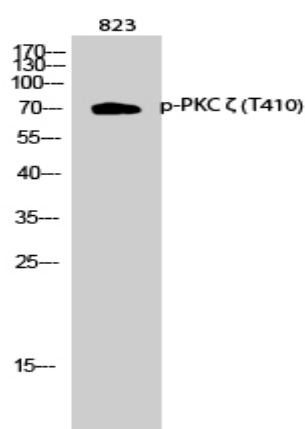
Host : Rabbit

Modifications : Phospho

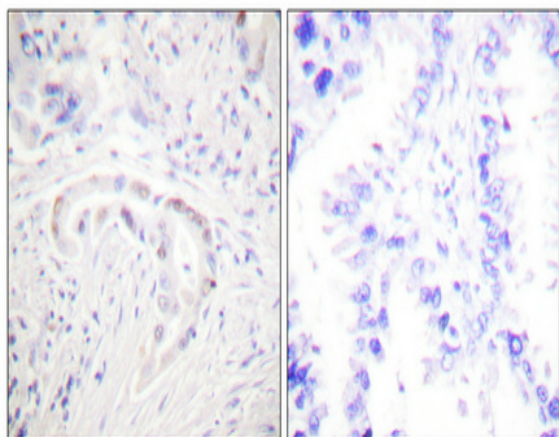
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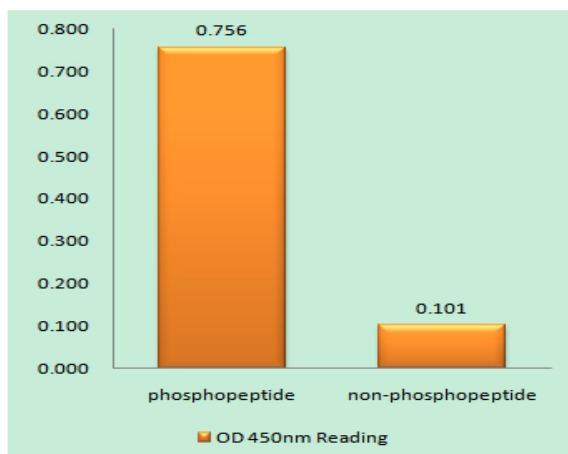
Western Blot analysis of various cells using Phospho-PKC ζ (T410) Polyclonal Antibody diluted at 1:1000



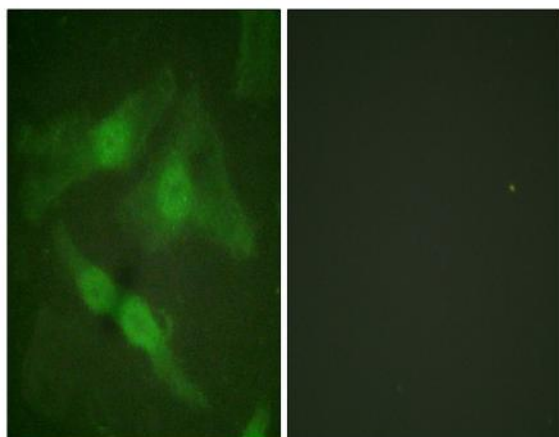
Western Blot analysis of 823 cells using Phospho-PKC ζ (T410) Polyclonal Antibody diluted at 1:1000



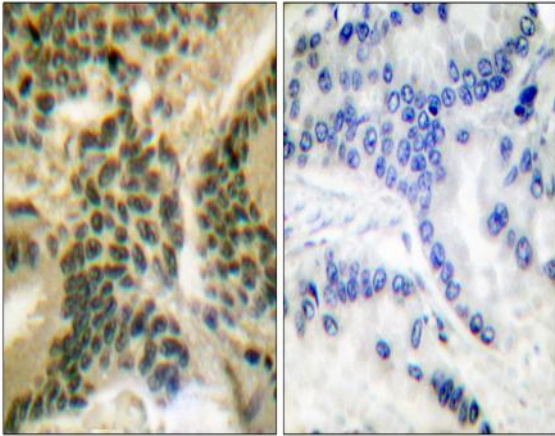
Immunohistochemical analysis of paraffin-embedded Human lung cancer. Antibody was diluted at 1:100(4° overnight). High-pressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negative contrl (right) obtaned from antibody was pre-absorbed by immunogen peptide.



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.