

Product Name: PKC θ (phospho Thr538) Rabbit Polyclonal Antibody
Catalog #: APRab05268

Summary

Production Name	PKC θ (phospho Thr538) Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	IHC, WB, ELISA
Reactivity	Human, Mouse, Rat

Performance

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

Immunogen

Gene Name	PRKCQ
Alternative Names	PRKCQ; PRKCT; Protein kinase C theta type; nPKC-theta
Gene ID	5588.0
SwissProt ID	Q04759. The antiserum was produced against synthesized peptide derived from human PKC θ around the phosphorylation site of Thr538. AA range: 504-553

Application

Dilution Ratio	WB 1:500 - 1:2000. IHC 1:100 - 1:300. ELISA: 1:5000..
Molecular Weight	81kD

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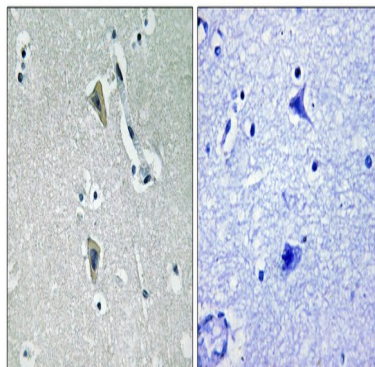
Background

Protein kinase C (PKC) is a family of serine- and threonine-specific protein kinases that can be activated by calcium and the 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 family members 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 a distinct role. The protein encoded by this gene is one of the PKC family members. It is a calcium-independent and phospholipid-dependent protein kinase. This kinase is important for T-cell activation. It is required for the activation of the transcription factors NF-kappaB and AP-1, and may link the T cell receptor (TCR) signaling complex to the activation of the transcription factors. [provided by RefSeq, Jul 2008],catalytic activity:ATP + a protein = ADP + a phosphoprotein.,cofactor:Magnesium.,domain:The C1 domain, containing the phorbol ester/DAG-type region 1 (C1A) and 2 (C1B), is the diacylglycerol sensor and the C2 domain is a non-calcium binding domain.,enzyme regulation:Three specific sites; Thr-538 (activation loop of the kinase domain), Ser-676 (turn motif) and Ser-695 (hydrophobic region), 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.,function:This is a calcium-independent, phospholipid-dependent, serine- and threonine-specific enzyme. Essential for T-cell receptor (TCR)-mediated T-cell activation, but is dispensable during TCR-dependent thymocyte development. Links the TCR signaling complex to the activation of NF-kappa-B in mature T lymphocytes. Required for interleukin-2 (IL2) production.,PTM:Autophosphorylation at Thr-219 is required for targeting to the TCR and cellular function of PKC upon antigen receptor ligation.,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 C2 domain.,similarity:Contains 1 protein kinase domain.,similarity:Contains 2 phorbol-ester/DAG-type zinc fingers.,subunit:Interacts with TXNL2/PICOT.,tissue specificity:Skeletal muscle, megakaryoblastic cells and platelets.,

Research Area

Regulation_Microtubule; Regulation of Actin Dynamics; Stem cell pathway; Insulin Receptor; NF_kappaB; B Cell Receptor; AMPK

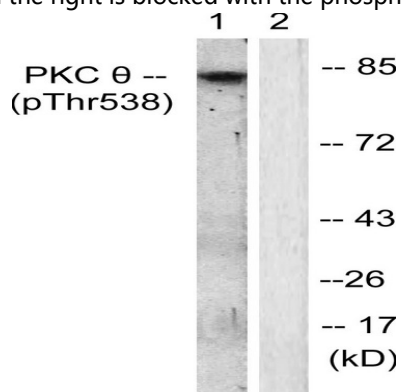
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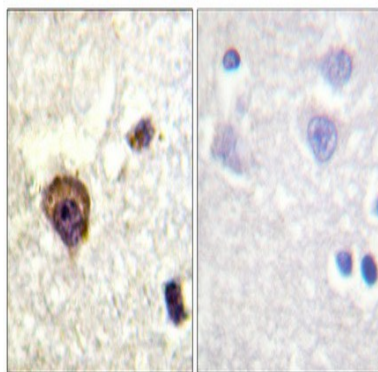
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Immunohistochemistry analysis of paraffin-embedded human brain, using PKC θ (Phospho-Thr538) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of lysates from Jurkat cells, using PKC θ (Phospho-Thr538) Antibody. The lane on the right is blocked with the phospho peptide.



Immunohistochemical analysis of paraffin-embedded Human brain. Antibody was diluted at 1:100 (4 $^{\circ}$,overnight) . High-pressure and temperature Tris-EDTA,pH8.0 was used for antigen retrieval. Negative contrl (right) obtained from antibody was pre-absorbed by immunogen peptide.

Note

For research use only.