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Datasheet for ABIN967739

## anti-PKC theta antibody (AA 21-217)

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### Overview

Quantity:	150 µg
Target:	PKC theta (PRKCQ)
Binding Specificity:	AA 21-217
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This PKC theta antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF), Immunoprecipitation (IP), Immunohistochemistry (Formalin-fixed Sections) (IHC (f))

### Product Details

Immunogen:	Human PKCtheta aa. 21-217
Clone:	27-PKCtheta
Isotype:	IgG2a kappa
Characteristics:	<ol style="list-style-type: none"><li>1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.</li><li>2. Please refer to us for technical protocols.</li><li>3. Source of all serum proteins is from USDA inspected abattoirs located in the United States.</li><li>4. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.</li></ol>
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity

## Product Details

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chromatography.

## Target Details

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Target: PKC theta (PRKCQ)

Alternative Name: PKC theta ([PRKCQ Products](#))

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. These proteins are products of multiple genes and alternative splicing. PKC consists of a single polypeptide chain containing four conserved regions (C) and five variable regions (V). The N-terminal half containing C1, C2, V1, and V2 constitutes the regulatory domain and interacts with the PKC activators Ca<sup>2+</sup>, phospholipid, diacylglycerol, or phorbol ester. However, the novel PKC (nPKC) subfamily members (delta, epsilon, eta, and theta isoforms) and the atypical PKC (aPKC) subfamily members (zeta, iota, and lambda isoforms) are Ca<sup>2+</sup>-independent and lack the C2 domain. The aPKC members are unique in that their activity is independent of diacylglycerols and phorbol esters. They also lack one repeat of the cysteine-rich sequences that are conserved in cPKC and nPKC members. The C-terminal region of PKC contains the catalytic domain. The PKC pathway represents a major signal transduction system that is activated following ligand-stimulation of transmembrane receptors by hormones, neurotransmitters, and growth factors. PKCtheta transcripts are expressed in most tissues with the highest levels being found in hematopoietic tissues and cell lines, including T cells and thymocytes. PKCtheta mRNA is readily detectable in skeletal muscle, lung and brain. However, PKCtheta expression is not detected in several human carcinoma cell lines. Abundant expression of this PKC isozyme in hematopoietic cells suggest that it may have a role in growth and differentiation processes of these cells. This antibody is routinely tested by western blot analysis.

Molecular Weight: 79 kDa

Pathways: [TCR Signaling](#), [Fc-epsilon Receptor Signaling Pathway](#), [Myometrial Relaxation and Contraction](#), [Regulation of G-Protein Coupled Receptor Protein Signaling](#), [Thromboxane A2 Receptor Signaling](#)

## Application Details

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Comment: Related Products: ABIN968537, ABIN967389

Restrictions: For Research Use only

## Handling

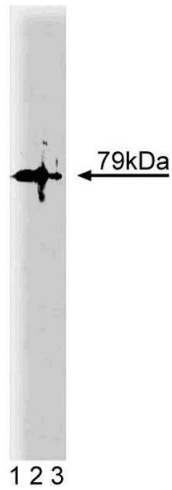
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Format:	Liquid
Concentration:	250 µg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20° C.

## Publications

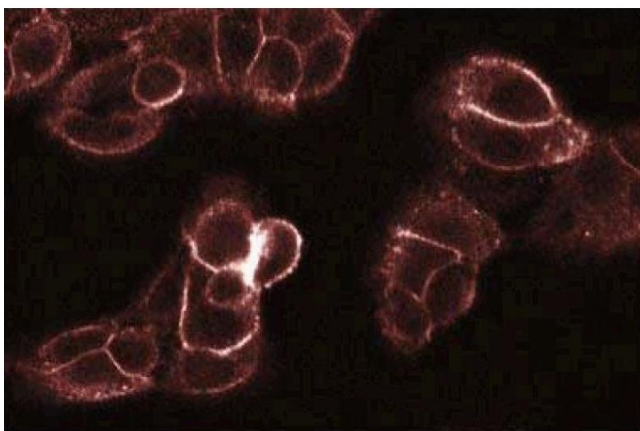
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- Product cited in:
- Villalba, Bi, Rodriguez, Tanaka, Schoenberger, Altman: "Vav1/Rac-dependent actin cytoskeleton reorganization is required for lipid raft clustering in T cells." in: **The Journal of cell biology**, Vol. 155, Issue 3, pp. 331-8, (2001) ([PubMed](#)).
- Dienz, Hehner, Droge, Schmitz: "Synergistic activation of NF-kappa B by functional cooperation between vav and PKCtheta in T lymphocytes." in: **The Journal of biological chemistry**, Vol. 275, Issue 32, pp. 24547-51, (2000) ([PubMed](#)).
- Villalba, Coudronniere, Deckert, Teixeira, Mas, Altman: "A novel functional interaction between Vav and PKCtheta is required for TCR-induced T cell activation." in: **Immunity**, Vol. 12, Issue 2, pp. 151-60, (2000) ([PubMed](#)).
- Soderling: "Protein kinases. Regulation by autoinhibitory domains." in: **The Journal of biological chemistry**, Vol. 265, Issue 4, pp. 1823-6, (1990) ([PubMed](#)).
- Nishizuka: "The molecular heterogeneity of protein kinase C and its implications for cellular regulation." in: **Nature**, Vol. 334, Issue 6184, pp. 661-5, (1988) ([PubMed](#)).



### Western Blotting

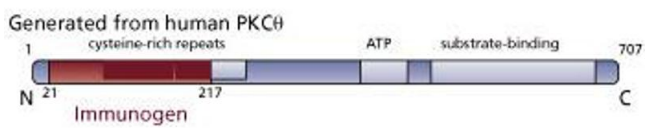
**Image 1.** Western blot analysis of PKCtheta on a Jurkat lysate. Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the anti-human PKCtheta antibody.



### Immunofluorescence

**Image 2.** Immunofluorescence staining of A431 cells.

**Image 3.**



Please check the [product details page](#) for more images. Overall 4 images are available for ABIN967739.