



[Go to Product page](#)

Datasheet for ABIN967769

## anti-PKC beta antibody (AA 126-324)

2 Images

5 Publications

### Overview

Quantity:	150 µg
Target:	PKC beta (PRKCB)
Binding Specificity:	AA 126-324
Reactivity:	Human, Rat, Mouse, Chicken
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This PKC beta antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunoprecipitation (IP)

### Product Details

Immunogen:	Human PKCbeta aa. 126-324
Clone:	36-PKCb
Isotype:	IgG2b
Cross-Reactivity:	Rat (Rattus), Mouse (Murine), Chicken
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. 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><li>4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.</li></ol>

## Product Details

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**Purification:** The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

## Target Details

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**Target:** PKC beta (PRKCB)

**Alternative Name:** PKC beta ([PRKCB 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. 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. PKCbeta is highly expressed in brain and hematopoietic cells. Autophosphorylation of PKCbeta occurs at the N- and C-terminal regions, as well as within the hinge region. However, only the COOH-terminal autophosphorylation sites are essential for PKCbeta's function and subcellular localization. PKCbeta is critical for the proliferation of K562 cells, as well as being an important regulator of human melanogenesis.

**Molecular Weight:** 80 kDa

**Pathways:** [WNT Signaling](#), [TCR Signaling](#), [Thyroid Hormone Synthesis](#), [Nuclear Hormone Receptor Binding](#), [Chromatin Binding](#), [Myometrial Relaxation and Contraction](#), [VEGF Signaling](#), [Unfolded Protein Response](#), [BCR Signaling](#)

## Application Details

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**Comment:** Related Products: ABIN968545, 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:	<p>Masur, Lang, Niggemann, Zanker, Entschladen: "High PKC alpha and low E-cadherin expression contribute to high migratory activity of colon carcinoma cells." in: <b>Molecular biology of the cell</b>, Vol. 12, Issue 7, pp. 1973-82, (2001) (<a href="#">PubMed</a>).</p> <p>Stebbins, Mochly-Rosen: "Binding specificity for RACK1 resides in the V5 region of beta II protein kinase C." in: <b>The Journal of biological chemistry</b>, Vol. 276, Issue 32, pp. 29644-50, (2001) (<a href="#">PubMed</a>).</p> <p>Bell, Burns: "Lipid activation of protein kinase C." in: <b>The Journal of biological chemistry</b>, Vol. 266, Issue 8, pp. 4661-4, (1991) (<a href="#">PubMed</a>).</p> <p>Soderling: "Protein kinases. Regulation by autoinhibitory domains." in: <b>The Journal of biological chemistry</b>, Vol. 265, Issue 4, pp. 1823-6, (1990) (<a href="#">PubMed</a>).</p> <p>Nishizuka: "The molecular heterogeneity of protein kinase C and its implications for cellular regulation." in: <b>Nature</b>, Vol. 334, Issue 6184, pp. 661-5, (1988) (<a href="#">PubMed</a>).</p>
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### Western Blotting

**Image 1.** Western blot analysis of PKC $\beta$  on rat brain lysate. Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of anti-PKC $\beta$  antibody.

**Image 2.**

