

Datasheet for ABIN967734

anti-PKC epsilon antibody (AA 1-175)



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Overview

Quantity:	50 µg
Target:	PKC epsilon (PRKCE)
Binding Specificity:	AA 1-175
Reactivity:	Human, Mouse, Rat, Dog, Chicken
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This PKC epsilon antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Immunoprecipitation (IP)

Product Details

Immunogen:	Human PKCepsilon aa. 1-175
Clone:	21-PKCepsilon
Isotype:	IgG2a
Cross-Reactivity:	Rat (Rattus), Dog (Canine), Mouse (MURINE), Chicken
Characteristics:	<ol style="list-style-type: none"> 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 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. 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

Product Details

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

Target:	PKC epsilon (PRKCE)
Alternative Name:	PKC epsilon (PRKCE Products)
Background:	<p>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 PKC activators Ca²⁺, phospholipid, diacylglycerol, or phorbol ester. However, the novel PKC (nPKC) subfamily members (delta, eta, eta, and theta isoforms) and the atypical PKC (aPKC) subfamily members (zeta, iota, and lambda isoforms) are Ca²⁺ independent and lack the C2 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. Expression of the 90 kDa PKCalpha is induced by interferon-alpha. Generally, PKCalpha is expressed at very low levels in normal murine tissues, except brain. Overexpression of PKCalpha leads to increased growth rates and higher cell densities in monolayer cultures. A high level of expression is seen in several hematopoietic cell lines and tumors. This suggests a possible role for PKCalpha in tumorigenesis.</p>
Molecular Weight:	90 kDa
Pathways:	TCR Signaling , EGFR Signaling Pathway , Neurotrophin Signaling Pathway , Positive Regulation of Peptide Hormone Secretion , Activation of Innate immune Response , Cellular Response to Molecule of Bacterial Origin , Regulation of Actin Filament Polymerization , Myometrial Relaxation and Contraction , Regulation of Carbohydrate Metabolic Process , Interaction of EGFR with phospholipase C-gamma , Thromboxane A2 Receptor Signaling

Application Details

Restrictions:	For Research Use only
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Handling

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

Product cited in:

Baines, Song, Zheng, Wang, Zhang, Wang, Guo, Bolli, Cardwell, Ping: "Protein kinase Cepsilon interacts with and inhibits the permeability transition pore in cardiac mitochondria." in: **Circulation research**, Vol. 92, Issue 8, pp. 873-80, (2003) ([PubMed](#)).

Balafanova, Bolli, Zhang, Zheng, Pass, Bhatnagar, Tang, Wang, Cardwell, Ping: "Nitric oxide (NO) induces nitration of protein kinase Cepsilon (PKCepsilon), facilitating PKCepsilon translocation via enhanced PKCepsilon-RACK2 interactions: a novel mechanism of no-triggered activation of PKCepsilon." in: **The Journal of biological chemistry**, Vol. 277, Issue 17, pp. 15021-7, (2002) ([PubMed](#)).

Ping, Song, Zhang, Guo, Cao, Li, Wu, Vondriska, Pass, Tang, Pierce, Bolli: "Formation of protein kinase C(epsilon)-Lck signaling modules confers cardioprotection." in: **The Journal of clinical investigation**, Vol. 109, Issue 4, pp. 499-507, (2002) ([PubMed](#)).

Zhu, Fang, Narla, Uckun: "A requirement for protein kinase C inhibition for calcium-triggered apoptosis in acute lymphoblastic leukemia cells." in: **Clinical cancer research : an official journal of the American Association for Cancer Research**, Vol. 5, Issue 2, pp. 355-60, (1999) ([PubMed](#)).

Mischak, Kolch, Goodnight, Davidson, Rapp, Rose-John, Mushinski: "Expression of protein kinase C genes in hemopoietic cells is cell-type- and B cell-differentiation stage specific." in: **Journal of immunology (Baltimore, Md. : 1950)**, Vol. 147, Issue 11, pp. 3981-7, (1991) ([PubMed](#)).

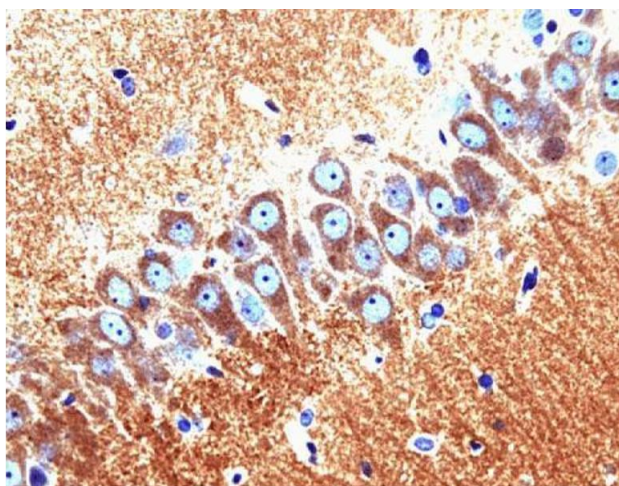
There are more publications referencing this product on: [Product page](#)

Images



Western Blotting

Image 1. Western blot analysis of PKCepsilon on rat brain lysate. Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of PKCepsilon.



Immunohistochemistry (Paraffin-embedded Sections)

Image 2. PKC epsilon (clone 21) staining on rat brain. Formalin fixed paraffin section with citrate buffer pretreatment. 40X