Phospho PKC Eta (T513) Antibody Antigenic Blocking Peptide

PRODUCT OVERVIEW

Product Name	Phospho-PKC eta, Blocking Peptide
Full Product Name	Phospho PKC eta (T513) Antibody Antigenic Blocking Peptide
Product Gene Name	PKC blocking peptide
Product Synonym Names	MGC 5363; MGC26269; MGC5363; PKC L; PRKCH; PRKCL; Protein kinase C eta type antibody
Form/Format	Antigenic Blocking Peptide
Concentration	Quantity: 250 ug; Volume: 100 ul (lot specific)
Preparation and Storage	-20• degree C for long term storage
Antibody/Peptide Pairs	Phospho-PKC eta peptide (MBS544319) is used for blocking the activity of Phospho-PKC eta antibody (MBS544280)
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Molecular Weight	59,521 Da
OMIM	601367
Immunogen	Phosphorylated synthetic peptide
Expression	Most abundant in lung, less in heart and skin.
Modification	Phosphorylated
Determinant	C-epitope
Molecular Function	Kinase; Serine/threonine-protein kinase, Transferase
Structure	Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PKC subfamily. Contains 1 AGC-kinase C-terminal domain. Contains 1 C2 domain. Contains 2 phorbol-ester/DAG-type zinc fingers. Contains 1 protein kinase domain.
Subcellular Location	Cytoplasm
Applications Tested/Suitable for PKC blocking peptide	Immunodepletion, Immunocompetition
Application Notes for PKC blocking peptide	Western Blot: 1:500

Related Product Information for PKC blocking peptide	Antigenic Blocking Peptide Phosphorylated PKC eta T513 Antibody C-epitope Calcium-independent, phospholipid- and diacylglycerol (DAG)-dependent serine/threonine-protein kinase that is involved in the regulation of cell differentiation in keratinocytes and pre-B cell receptor, mediates regulation of epithelial tight junction integrity and foam cell formation, and is required for glioblastoma proliferation and apoptosis prevention in MCF-7 cells. In keratinocytes, binds and activates the tyrosine kinase FYN, which in turn blocks epidermal growth factor receptor (EGFR) signaling and leads to keratinocyte growth arrest and differentiation. Inhibits CDK2 kinase activity, leading to RB1 dephosphorylation and thereby G1 arrest in keratinocytes. In association with RALA activates actin depolymerization, which is necessary for keratinocyte differentiation. In the pre-B cell receptor signaling, functions downstream of BLNK by up-regulating IRF4, which in turn activates L chain gene rearrangement. Regulates epithelial tight junctions (TJs) by phosphorylating occludin (OCLN) on threonine residues, which is necessary for the assembly and maintenance of TJs. Is involved in lipopolysaccharide (LPS)-induced RGS2 down-regulation and foam cell formation. Upon PMA stimulation, mediates glioblastoma cell proliferation by activating the mTOR pathway, the PI3K/AKT pathway and the ERK1-dependent phosphorylation of ELK1. Involved in the protection of glioblastoma cells from irradiation-induced apoptosis by preventing caspase-9 activation. In camptothecin-treated MCF-7 cells, regulates NF-kappa-B upstream signaling by activating IKBKB, and confers protection against DNA damage-induced apoptosis. Promotes oncogenic functions of ATF2 in the nucleus while blocking its apoptotic function at mitochondria. Phosphorylates ATF2 which promotes its nuclear retention and transcriptional activity and negatively regulates its mitochondrial localization.
Other Notes	Small volumes of PKC blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for PKC purchase	MBS544319 is a blocking peptide targeting PKC. Also known as Phospho PKC eta (T513) Antibody Antigenic Blocking Peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PKC. It may not necessarily be applicable to this product.

NCBI GI #	28557781
NCBI GeneID	5583
NCBI Accession #	NP_006246
UniProt Primary Accession #	P24723
UniProt Secondary Accession #	Q16246; Q8NE03; B4DJN5
UniProt Related Accession #	P24723
GenBank Nucleotide #	NM_006255.4
NCBI Official Full Name	protein kinase C eta type
NCBI Official Synonym Full Names	protein kinase C eta
NCBI Official Symbol	PRKCH
NCBI Official Synonym Symbols	PKCL; PKC-L; PRKCL; nPKC-eta
UniProt Protein Name	Protein kinase C eta type
UniProt Synonym Protein Names	PKC-L; nPKC-eta
UniProt Gene Name	PRKCH
UniProt Synonym Gene Names	PKCL; PRKCL
UniProt Entry Name	KPCL_HUMAN
NCBI Protein Information	protein kinase C eta type

NCBI Summary for PKC	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 in cells. The protein encoded by this gene is one of the PKC family members. It is a calcium-independent and phospholipids-dependent protein kinase. It is predominantly expressed in epithelial tissues and has been shown to reside specifically in the cell nucleus. This protein kinase can regulate keratinocyte differentiation by activating the MAP kinase MAPK13 (p38delta)-activated protein kinase cascade that targets CCAAT/enhancer-binding protein alpha (CEBPA). It is also found to mediate the transcription activation of the transglutaminase 1 (TGM1) gene. Mutations in this gene are associated with susceptibility to cerebral infarction. [provided by RefSeq, Sep 2015]
UniProt Comments for PKC	PKCH: Calcium-independent, phospholipid- and diacylglycerol (DAG)-dependent serine/threonine-protein kinase that is involved in the regulation of cell differentiation in keratinocytes and pre-B cell receptor, mediates regulation of epithelial tight junction integrity and foam cell formation, and is required for glioblastoma proliferation and apoptosis prevention in MCF-7 cells. In keratinocytes, binds and activates the tyrosine kinase FYN, which in turn blocks epidermal growth factor receptor (EGFR) signaling and leads to keratinocyte growth arrest and differentiation. Associates with the cyclin CCNE1-CDK2-p27Kip1 complex and inhibits CDK2 kinase activity, leading to RB1 dephosphorylation and thereby G1 arrest in keratinocytes. In association with RALA activates actin depolymerization, which is necessary for keratinocyte differentiation. In the pre-B cell receptor signaling, functions downstream of BLNK by up-regulating IRF4, which in turn activates L chain gene rearrangement. Regulates epithelial tight junctions (TJs) by phosphorylating occludin (OCLN) on threonine residues, which is necessary for the assembly and maintenance of TJs. In association with PLD2 and via TLR4 signaling, is involved in lipopolysaccharide (LPS)-induced RGS2 down-regulation and foam cell formation. Upon PMA stimulation, mediates glioblastoma cell proliferation by activating the mTOR pathway, the PI3K/AKT pathway and the ERK1- dependent phosphorylation of ELK1. Involved in the protection of glioblastoma cells from irradiation-induced apoptosis by preventing caspase-9 activation. In camptothecin-treated MCF-7 cells, regulates NF-kappa-B upstream signaling by activating IKBKB, and confers protection against DNA damage-induced apoptosis. Interacts with FYN and RALA. Interacts with DGKQ. Most abundant in lung, less in heart and skin. Novel PKCs (PRKCD, PRKCE, PRKCH and PRKCQ) are calcium-insensitive, but activated by diacylglycerol (DAG) and phosphatidylserine. Three specific sites; Thr-513 (activation loop of the kinase domain), Thr-656 (turn motif) and Ser-675 (hydrophobic region), need to be phosphorylated for its full activation. Belongs to the protein kinase superfamily. AGC Ser/Thr protein kinase family. PKC subfamily. Protein type: Protein kinase, AGC; Kinase, protein; EC 2.7.11.13; Protein kinase, Ser/Thr (non-receptor); AGC group; PKC family; Eta subfamily Chromosomal Location of Human Ortholog: 14q23.1 Cellular Component: cytoplasm; cytosol; intercellular junction; plasma membrane Molecular Function: ATP binding; calcium-independent protein kinase C activity; enzyme binding; metal ion binding; protein kinase C activity; Ral GTPase binding Biological Process: activation of NF-kappaB transcription factor; peptidyl-serine phosphorylation; platelet activation; positive regulation of B cell receptor signaling pathway; positive regulation of keratinocyte differentiation; protein amino acid phosphorylation; signal transduction Disease: Stroke, Ischemic
Research Articles on PKC	**1.** Meta-analysis indicated that the 1425G/A SNP in PRKCH may contribute to susceptibility of stroke, especially for ischemic stroke.
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