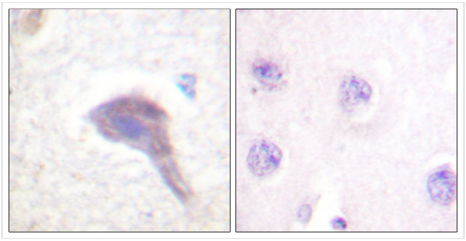
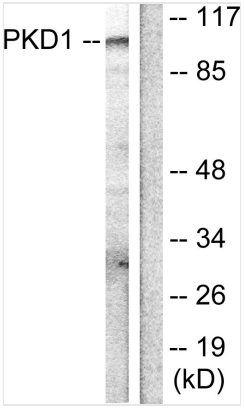
PKD1/PKC Antibody

PRODUCT OVERVIEW

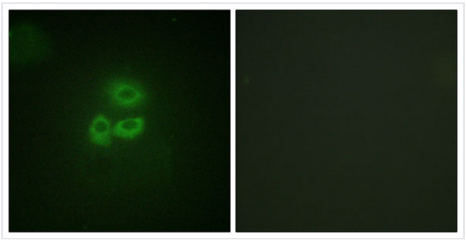
Product Name	PKD1/PKC, Antibody
Full Product Name	PKD1/PKC mu (Ab-205) Antibody
Product Gene Name	anti-PKD1/PKC antibody
Product Synonym Names	EC 2.7.11.13; KPCD1; PKC-mu; PKCM; PKD; PRKCM; PRKD1; Protein kinase C; mu type; Protein kinase D; kinase PKD1; nPKC-mu
Species Reactivity	Human, Mouse
Form/Format	In phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purity/Purification	Affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Specificity	PKD1/PKC mu (Ab-205) antibody detects endogenous levels of total PKD1/PKC mu protein.
Preparation and Storage	Store at-20 degree C for 1 year.
Molecular Weight	101,704 Da
OMIM	605435
3D Structure	ModBase 3D Structure for Q15139
Immunogen	The antiserum was produced against synthesized non-phosphopeptide derived from human PKD1/PKC mu around the phosphorylation site of serine 205 (R-L-SP-N-V).
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-PKD1/PKC antibody	Western Blot (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), ELISA (EIA)
Application Notes for anti-PKD1/PKC antibody	WB: 1:500~1:1000 IHC: 1:50~1:100 IF: 1:100~1:500 ELISA: 1:10000
Related Product Information for anti-PKD1/PKC antibody	MBS8509613 is an antibody targeting PKD1/PKC. Also known as PKD1/PKC mu (Ab-205) Antibody. Reactive in Human, Mouse.
Product References and Citations for anti-PKD1/PKC antibody	Lynn Pritchard, Hum. Mol. Genet., Nov 2000; 9: 2617-2627. Klaus B. Piontek, J. Am. Soc. Nephrol., Dec 2004; 15: 3035-3043. Saori Nishio, J. Clin. Invest., Apr 2005; 115: 910-918. Guanqing Wu, Hum. Mol. Genet., Aug 2002; 11: 1845-1854.
Other Notes	Small volumes of anti-PKD1/PKC antibody 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.



Testing Data of anti-PKD1/PKC antibody
Peptide-+



Immunohistochemistry (IHC) of anti-PKD1/PKC antibody
Immunohistochemistry analysis of paraffin-embedded human brain tissue using PKD1/PKC mu (Ab-205) antibody. Western blot analysis of extracts from HuvEc cells, treated with PMA (125ng/ml, 30mins), using PKD1/PKC mu (Ab-205) antibody.



Immunofluorescence (IF) of anti-PKD1/PKC antibody
Peptide-+ Immunofluorescence analysis of A549 cells, using PKD1/PKC mu (Ab-205) antibody.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PKD1/PKC. It may not necessarily be applicable to this product.

NCBI GI #	115529463
NCBI GeneID	5587
NCBI Accession #	NP_002733.2
UniProt Primary Accession #	Q15139
UniProt Secondary Accession #	A6NL64; B2RAF6
UniProt Related Accession #	Q15139
GenBank Nucleotide #	NM_002742.2
NCBI Official Full Name	serine/threonine-protein kinase D1 isoform 2
NCBI Official Synonym Full Names	protein kinase D1
NCBI Official Symbol	PRKD1
NCBI Official Synonym Symbols	PKD; PKCM; CHDED; PRKCM; PKC-MU
UniProt Protein Name	Serine/threonine-protein kinase D1
UniProt Synonym Protein Names	Protein kinase C mu type; Protein kinase D; nPKC-D1; nPKC-mu
UniProt Gene Name	PRKD1
UniProt Synonym Gene Names	PKD; PKD1; PRKCM
NCBI Protein Information	serine/threonine-protein kinase D1

NCBI Summary for PKD1/PKC	The protein encoded by this gene is a serine/threonine protein kinase involved in many cellular processes, including Golgi body membrane integrity and transport, cell migration and differentiation, MAPK8/JNK1 and Ras pathway signaling, MAPK1/3 (ERK1/2) pathway signaling, cell survival, and regulation of cell shape and adhesion. [provided by RefSeq, Jan 2017]
UniProt Comments for PKD1/PKC	Serine/threonine-protein kinase that converts transient diacylglycerol (DAG) signals into prolonged physiological effects downstream of PKC, and is involved in the regulation of MAPK8/JNK1 and Ras signaling, Golgi membrane integrity and trafficking, cell survival through NF-kappa-B activation, cell migration, cell differentiation by mediating HDAC7 nuclear export, cell proliferation via MAPK1/3 (ERK1/2) signaling, and plays a role in cardiac hypertrophy, VEGFA-induced angiogenesis, genotoxic-induced apoptosis and flagellin-stimulated inflammatory response. Phosphorylates the epidermal growth factor receptor (EGFR) on dual threonine residues, which leads to the suppression of epidermal growth factor (EGF)-induced MAPK8/JNK1 activation and subsequent JUN phosphorylation. Phosphorylates RIN1, inducing RIN1 binding to 14-3-3 proteins YWHAB, YWHAE and YWHAZ and increased competition with RAF1 for binding to GTP-bound form of Ras proteins (NRAS, HRAS and KRAS). Acts downstream of the heterotrimeric G-protein beta/gamma-subunit complex to maintain the structural integrity of the Golgi membranes, and is required for protein transport along the secretory pathway. In the trans-Golgi network (TGN), regulates the fission of transport vesicles that are on their way to the plasma membrane. May act by activating the lipid kinase phosphatidylinositol 4-kinase beta (PI4KB) at the TGN for the local synthesis of phosphorylated inositol lipids, which induces a sequential production of DAG, phosphatidic acid (PA) and lyso-PA (LPA) that are necessary for membrane fission and generation of specific transport carriers to the cell surface. Under oxidative stress, is phosphorylated at Tyr-463 via SRC-ABL1 and contributes to cell survival by activating IKK complex and subsequent nuclear translocation and activation of NFKB1. Involved in cell migration by regulating integrin alpha-5/beta-3 recycling and promoting its recruitment in newly forming focal adhesion. In osteoblast differentiation, mediates the bone morphogenetic protein 2 (BMP2)-induced nuclear export of HDAC7, which results in the inhibition of HDAC7 transcriptional repression of RUNX2. In neurons, plays an important role in neuronal polarity by regulating the biogenesis of TGN-derived dendritic vesicles, and is involved in the maintenance of dendritic arborization and Golgi structure in hippocampal cells. May potentiate mitogenesis induced by the neuropeptide bombesin or vasopressin by mediating an increase in the duration of MAPK1/3 (ERK1/2) signaling, which leads to accumulation of immediate-early gene products including FOS that stimulate cell cycle progression. Plays an important role in the proliferative response induced by low calcium in keratinocytes, through sustained activation of MAPK1/3 (ERK1/2) pathway. Downstream of novel PKC signaling, plays a role in cardiac hypertrophy by phosphorylating HDAC5, which in turn triggers XPO1/CRM1-dependent nuclear export of HDAC5, MEF2A transcriptional activation and induction of downstream target genes that promote myocyte hypertrophy and pathological cardiac remodeling. Mediates cardiac troponin I (TNNI3) phosphorylation at the PKA sites, which results in reduced myofilament calcium sensitivity, and accelerated crossbridge cycling kinetics. The PRKD1-HDAC5 pathway is also involved in angiogenesis by mediating VEGFA-induced specific subset of gene expression, cell migration, and tube formation. In response to VEGFA, is necessary and required for HDAC7 phosphorylation which induces HDAC7 nuclear export and endothelial cell proliferation and migration. During apoptosis induced by cytarabine and other genotoxic agents, PRKD1 is cleaved by caspase-3 at Asp-378, resulting in activation of its kinase function and increased sensitivity of cells to the cytotoxic effects of genotoxic agents. In epithelial cells, is required for transducing flagellin-stimulated inflammatory responses by binding and phosphorylating TLR5, which contributes to MAPK14/p38 activation and production of inflammatory cytokines. May play a role in inflammatory response by mediating activation of NF-kappa-B. May be involved in pain transmission by directly modulating TRPV1 receptor. Plays a role in activated KRAS-mediated stabilization of ZNF304 in colorectal cancer (CRC) cells (PubMed:24623306). Regulates nuclear translocation of transcription factor TFEB in macrophages upon live S.enterica infection ().
Research Articles on PKD1/PKC	**1.** p110alpha subunit of PI3K and PKD mediate YAP activation in response to insulin and neurotensin in pancreatic cancer cells. Inhibitors of PI3K or PKD disrupt crosstalk between insulin receptor and GPCR signaling systems by blocking YAP/TEAD-regulated gene expression in pancreatic cancer cells
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