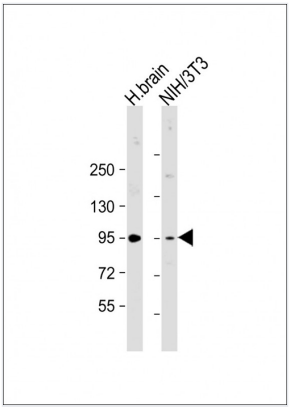
PRKD2 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	PRKD2, Polyclonal Antibody
Full Product Name	PRKD2 Antibody (Center)
Product Gene Name	anti-PRKD2 antibody
Product Synonym Gene Name	PKD2
Product Synonym Names	Serine/threonine-protein kinase D2; 2.7.11.13; nPKC-D2; PRKD2; PKD2; Purified Rabbit Polyclonal Antibody (Pab)
Clonality	Polyclonal
Isotype	Ig
Host	Rabbit
Species Reactivity	Human, Mouse Predicted: Mouse, Rat
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Concentration	0.75 (lot specific)
Specificity	This PRKD2 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 556-590 amino acids from the Central region of human PRKD2.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 2 weeks. For long term storage store at -20 degree C in small aliquots to prevent freeze-thaw cycles.
Molecular Weight	96750 Da
OMIM	607074
3D Structure	ModBase 3D Structure for Q9BZL6
Cellular Location	Cytoplasm. Cell membrane. Nucleus. Golgi apparatus, trans-Golgi network. Note=Translocation to the cell membrane is required for kinase activation (By similarity). Accumulates in the nucleus upon CK1-mediated phosphorylation after activation of G-protein-coupled receptors Nuclear accumulation is regulated by blocking nuclear export of active PRKD2 rather than by increasing import.
Tissue Location	Widely expressed.
Antigen Type	Synthesized Peptide
Product Categories/Family for anti-PRKD2 antibody	Signal Transduction
Applications Tested/Suitable for anti-PRKD2 antibody	Western Blot (WB), ELISA (EIA)
Application Notes for anti-PRKD2 antibody	WB~~1:2000

Related Product Information for anti-PRKD2 antibody	Serine/threonine-protein kinase that converts transient diacylglycerol (DAG) signals into prolonged physiological effects downstream of PKC, and is involved in the regulation of cell proliferation via MAPK1/3 (ERK1/2) signaling, oxidative stress- induced NF-kappa-B activation, inhibition of HDAC7 transcriptional repression, signaling downstream of T-cell antigen receptor (TCR) and cytokine production, and plays a role in Golgi membrane trafficking, angiogenesis, secretory granule release and cell adhesion. May potentiate mitogenesis induced by the neuropeptide bombesin 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. In response to oxidative stress, is phosphorylated at Tyr-438 by ABL1, which leads to the activation of PRKD2 without increasing its catalytic activity, and mediates activation of NF-kappa-B. In response to the activation of the gastrin receptor CCKBR, is phosphorylated at Ser-244 by CSNK1D and CSNK1E, translocates to the nucleus, phosphorylates HDAC7, leading to nuclear export of HDAC7 and inhibition of HDAC7 transcriptional repression of NR4A1/NUR77. Upon TCR stimulation, is activated independently of ZAP70, translocates from the cytoplasm to the nucleus and is required for interleukin-2 (IL2) promoter up-regulation. During adaptive immune responses, is required in peripheral T-lymphocytes for the production of the effector cytokines IL2 and IFNG after TCR engagement and for optimal induction of antibody responses to antigens. In epithelial cells stimulated with lysophosphatidic acid (LPA), is activated through a PKC-dependent pathway and mediates LPA-stimulated interleukin-8 (IL8) secretion via a NF-kappa-B-dependent pathway. During TCR-induced T-cell activation, interacts with and is activated by the tyrosine kinase LCK, which results in the activation of the NFAT transcription factors. In the trans-Golgi network (TGN), regulates the fission of transport vesicles that are on their way to the plasma membrane and in polarized cells is involved in the transport of proteins from the TGN to the basolateral membrane. Plays an important role in endothelial cell proliferation and migration prior to angiogenesis, partly through modulation of the expression of KDR/VEGFR2 and FGFR1, two key growth factor receptors involved in angiogenesis. In secretory pathway, is required for the release of chromogranin-A (CHGA)-containing secretory granules from the TGN. Downstream of PRKCA, plays important roles in angiotensin-2- induced monocyte adhesion to endothelial cells. Plays a regulatory role in angiogenesis and tumor growth by phosphorylating a downstream mediator CIB1 isoform 2, resulting in vascular endothelial growth factor A (VEGFA) secretion.
Product References and Citations for anti-PRKD2 antibody	Sturany S.,et al.J. Biol. Chem. 276:3310-3318(2001). Ota T.,et al.Nat. Genet. 36:40-45(2004). Grimwood J.,et al.Nature 428:529-535(2004). Bechtel S.,et al.BMC Genomics 8:399-399(2007). Zhang Q.-H.,et al.Genome Res. 10:1546-1560(2000).
Other Notes	Small volumes of anti-PRKD2 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.
Searchable Terms for PRKD2 purchase	MBS9217347 is an antibody targeting PRKD2. Also known as PRKD2 Antibody (Center). Reactive in Human, Mouse Predicted: Mouse, Rat. Host: Rabbit.



Western Blot (WB) of anti-PRKD2 antibody
All lanes : Anti-PRKD2 Antibody (Center) at 1:2000 dilutionLane 1: human brain lysateLane 2: NIH/3T3 whole cell lysateLysates/proteins at 20 ug per lane. SecondaryGoat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 97 kDaBlocking/Dilution buffer: 5% NFDM/TBST.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PRKD2. It may not necessarily be applicable to this product.

NCBI GI #	296434570

NCBI GeneID	25865
NCBI Accession #	Q9BZL6.2
UniProt Primary Accession #	Q9BZL6
UniProt Secondary Accession #	Q8NCK8; Q8TB08; Q9P0T6; Q9Y3X8; M0R2R2
UniProt Related Accession #	Q9BZL6
NCBI Official Full Name	Serine/threonine-protein kinase D2
NCBI Official Synonym Full Names	protein kinase D2
NCBI Official Symbol	PRKD2
NCBI Official Synonym Symbols	PKD2; HSPC187; nPKC-D2
UniProt Protein Name	Serine/threonine-protein kinase D2
UniProt Synonym Protein Names	nPKC-D2
Protein Family	Serine/threonine-protein kinase
UniProt Gene Name	PRKD2
UniProt Synonym Gene Names	PKD2
UniProt Entry Name	KPCD2_HUMAN
NCBI Protein Information	serine/threonine-protein kinase D2
NCBI Summary for PRKD2	The protein encoded by this gene belongs to the protein kinase D (PKD) family of serine/threonine protein kinases. This kinase can be activated by phorbol esters as well as by gastrin via the cholecystokinin B receptor (CCKBR) in gastric cancer cells. It can bind to diacylglycerol (DAG) in the trans-Golgi network (TGN) and may regulate basolateral membrane protein exit from TGN. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008]
UniProt Comments for PRKD2	PRKD2: a calcium-independent, phospholipid-dependent CAMK kinase of the PKD family. Activated by diacylglycerol and phorbol esters. may play a role in carcinoid tumor progression. Protein type: EC 2.7.11.13; Protein kinase, Ser/Thr (non-receptor); Motility/polarity/chemotaxis; Kinase, protein; Protein kinase, CAMK; CAMK group; PKD family Chromosomal Location of Human Ortholog: 19q13.3 Cellular Component: cytoplasm; nucleoplasm; nucleus Molecular Function: protein binding; protein kinase activity; protein serine/threonine kinase activity Biological Process: activation of CREB transcription factor; activation of NF-kappaB transcription factor; cell death; peptidyl-serine phosphorylation; positive regulation of angiogenesis; positive regulation of blood vessel endothelial cell migration; positive regulation of cell adhesion; positive regulation of endothelial cell proliferation; positive regulation of fibroblast growth factor receptor signaling pathway; positive regulation of interleukin-2 production; positive regulation of interleukin-8 production; positive regulation of peptidyl-serine phosphorylation; positive regulation of T cell receptor signaling pathway; positive regulation of transcription factor activity; positive regulation of transcription from RNA polymerase II promoter; positive regulation of vascular endothelial growth factor receptor signaling pathway; protein amino acid autophosphorylation; protein amino acid phosphorylation; T cell receptor signaling pathway; vascular endothelial growth factor receptor signaling pathway
Research Articles on PRKD2	**1.** Studies indicate that the loss of protein kinase D PKD1 is thought to promote invasion and metastasis, while PKD2 and upregulated PKD3 to be positive regulators of proliferation.
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