

PKD2 (C-19): sc-74838

BACKGROUND

PKD2 (protein kinase D2), also known as PRKD2 or HSPC187, is a widely expressed protein belonging to the protein kinase D (PKD) family of serine/threonine kinases. In mammals, there are three members of the PKD family, namely PKC μ , PKD2 and PKC ν , and each contain a homologous catalytic domain but differ in their tissue expression and subcellular localization. PKD family members are activated by G protein-coupled receptors (GPCRs) and are known to participate in biological processes such as proliferation, apoptosis, migration, signal transduction and vesicle shedding. Shuttling between the nucleus and the cytoplasm, PKD2 contains one PH domain, one protein kinase domain and two phorbol-ester/DAG-type zinc fingers, and functions as a calcium-independent, phospholipid-dependent protein kinase. Upon activation of CCK-BR, PKD2 is phosphorylated by casein kinase I isoforms and subsequently accumulates in the nucleus. The result of the nuclear accumulation of PKD2 is the transcriptional activation of Nur77 and the nuclear exclusion of HDAC7. This suggests that PKD2 mediates CCK-BR-induced transcriptional activation.

REFERENCES

1. Sturany, S., et al. 2001. Molecular cloning and characterization of the human protein kinase D2. A novel member of the protein kinase D family of serine threonine kinases. *J. Biol. Chem.* 276: 3310-3318.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607074. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
3. Kovalevska, L.M., et al. 2006. Immunohistochemical studies of protein kinase D (PKD) 2 expression in malignant human lymphomas. *Exp. Oncol.* 28: 225-230.

CHROMOSOMAL LOCATION

Genetic locus: PRKD2 (human) mapping to 19q13.32; Prkd2 (mouse) mapping to 7 A2.

SOURCE

PKD2 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of PKD2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-74838 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

PKD2 (C-19) is recommended for detection of PKD2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

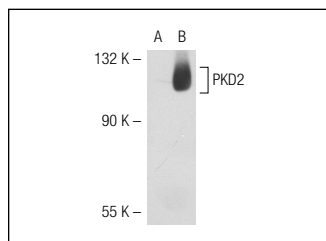
PKD2 (C-19) is also recommended for detection of PKD2 in additional species, including equine and canine.

Suitable for use as control antibody for PKD2 siRNA (h): sc-76155, PKD2 siRNA (m): sc-76156, PKD2 shRNA Plasmid (h): sc-76155-SH, PKD2 shRNA Plasmid (m): sc-76156-SH, PKD2 shRNA (h) Lentiviral Particles: sc-76155-V and PKD2 shRNA (m) Lentiviral Particles: sc-76156-V.

Molecular Weight of PKD2: 105 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or PKD2 (m2): 293T Lysate: sc-127343.

DATA



PKD2 (C-19): sc-74838. Western blot analysis of PKD2 expression in non-transfected: sc-117752 (A) and mouse PKD2 transfected: sc-127343 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Karam, M., et al. 2012. Protein kinase D1 stimulates proliferation and enhances tumorigenesis of MCF-7 human breast cancer cells through a MEK/ERK-dependent signaling pathway. *Exp. Cell Res.* 318: 558-569.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **PKD2 (F-2): sc-374344** or **PKD2 (H-6): sc-374213**, our highly recommended monoclonal alternatives to PKD2 (C-19).