

PKDCC (G-10): sc-514504

BACKGROUND

PKDCC (protein kinase domain-containing protein, cytoplasmic) also known as protein kinase-like protein Sgk493, sugen kinase 493 or vertebrate lonesome kinase, is 493 amino acid protein belonging to the protein kinase superfamily. PKDCC is found in the Golgi apparatus and is involved in protein transport to the plasma membrane and is also important in ATP binding, nucleotide binding, protein kinase activity, transferase activity and is required for longitudinal bone growth through regulation of chondrocyte differentiation. The PKDCC gene is conserved in chimpanzee, canine, mouse, rat and zebrafish, and the PKDCC protein is ubiquitously expressed in human tissues. PKDCC is suggested to be associated with atopy and atopic individuals with asthma, however murine PKDCC knockouts show extreme phenotypes that are unrelated to atopy or asthma, suggesting an additional role in abnormal respiration.

REFERENCES

- Hanks, S.K. 2003. Genomic analysis of the eukaryotic protein kinase superfamily: a perspective. *Genome Biol.* 4: 111.
- Castro-Giner, F., Bustamante, M., Ramon González, J., Kogevinas, M., Jarvis, D., Heinrich, J., Antó, J.M., Wjst, M., Estivill, X. and de Cid, R. 2009. A pooling-based genome-wide analysis identifies new potential candidate genes for atopy in the European community respiratory health survey (ECRHS). *BMC Med. Genet.* 10: 128.
- Sewell, W., Sparrow, D.B., Smith, A.J., Gonzalez, D.M., Rappaport, E.F., Dunwoodie, S.L. and Kusumi, K. 2009. Cyclical expression of the Notch/Wnt regulator Nrarp requires modulation by Dll3 in somitogenesis. *Dev. Biol.* 329: 400-409.
- Imuta, Y., Nishioka, N., Kiyonari, H. and Sasaki, H. 2009. Short limbs, cleft palate, and delayed formation of flat proliferative chondrocytes in mice with targeted disruption of a putative protein kinase gene, PKDCC (AW548124). *Dev. Dyn.* 238: 210-222.
- Kinoshita, M., Era, T., Jakt, L.M. and Nishikawa, S. 2009. The novel protein kinase Vlk is essential for stromal function of mesenchymal cells. *Development* 136: 2069-2079.
- Meurs, K.M., Mauceli, E., Lahmers, S., Acland, G.M., White, S.N. and Lindblad-Toh, K. 2010. Genome-wide association identifies a deletion in the 3' untranslated region of striatin in a canine model of arrhythmogenic right ventricular cardiomyopathy. *Hum. Genet.* 128: 315-324.

CHROMOSOMAL LOCATION

Genetic locus: PKDCC (human) mapping to 2p21; Pkdcc (mouse) mapping to 17 E4.

SOURCE

PKDCC (G-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 210-232 within an internal region of PKDCC of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514504 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PKDCC (G-10) is recommended for detection of PKDCC of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

Suitable for use as control antibody for PKDCC siRNA (h): sc-94454, PKDCC siRNA (m): sc-153418, PKDCC shRNA Plasmid (h): sc-94454-SH, PKDCC shRNA Plasmid (m): sc-153418-SH, PKDCC shRNA (h) Lentiviral Particles: sc-94454-V and PKDCC shRNA (m) Lentiviral Particles: sc-153418-V.

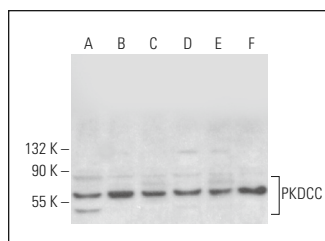
Molecular Weight of PKDCC: 54 kDa.

Positive Controls: C2C12 whole cell lysate: sc-364188, c4 whole cell lysate: sc-364186 or NIH/3T3 whole cell lysate: sc-2210.

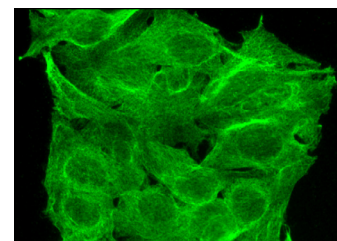
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PKDCC (G-10): sc-514504. Western blot analysis of PKDCC expression in c4 (A), NIH/3T3 (B), L6 (C), C2C12 (D), Sol8 (E) and P19 (F) whole cell lysates.



PKDCC (G-10): sc-514504. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic and membrane localization.

STORAGE

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