SANTA CRUZ BIOTECHNOLOGY, INC.

Polycystin-1 (C-20): sc-10372

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Autosomal dominant polycystic kidney disease (ADPKD) is characterized by the formation of cysts in kidney tubules as well as in liver and pancreas tissues. Cells within these cysts display abnormalities in proliferation and polarity. The integral membrane protein, Polycystin-1 (PKD1) is mutated in a majority of patients with ADPKD. Polycystin-1 is expressed in renal tubular epithelial cells and colocalizes with cell and focal adhesion proteins, including E-cadherin, catenins, vinculin, and paxillin, to focal areas in order to form a larger multiprotein complex. Polycystin-1 is posttranslationally modified by tyrosine phosphorylation and associates with Polycystin-2 (PKD2) to mediate AP-1 expression, which suggests that Polycystin-1 is involved in cell-cell and cell-matrix interactions to control cell proliferation and polarity.

CHROMOSOMAL LOCATION

Genetic locus: PKD1 (human) mapping to 16p13.3.

SOURCE

Polycystin-1 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Polycystin-1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-10372 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Polycystin-1 (C-20) is recommended for detection of polycystin-1 of human origin by Western Blotting (starting dilution 1:200, 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 Polycystin-1 siRNA (h): sc-40861, Polycystin-1 shRNA Plasmid (h): sc-40861-SH and Polycystin-1 shRNA (h) Lentiviral Particles: sc-40861-V.

Molecular Weight of Polycystin-1: 485 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224.

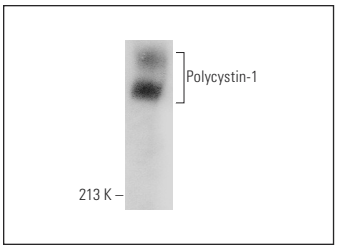
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

DATA



Polycystin-1 (C-20): sc-10372. Western blot analysis of Polycystin-1 expression in Caki-1 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Kim, H., et al. 2004. SIAH-1 interacts with the intracellular region of Polycystin-1 and affects its stability via the ubiquitin-proteasome pathway. J. Am. Soc. Nephrol. 15: 2042-2049.
2. Kim, H., et al. 2004. Depletion of PKD1 by an antisense oligodeoxynucleotide induces premature G_1/S-phase transition. Eur. J. Hum. Genet 12: 433-440.
3. Boca, M., et al. 2007. Polycystin-1 induces cell migration by regulating phosphatidylinositol 3-kinase-dependent cytoskeletal rearrangements and GSK3β-dependent cell cell mechanical adhesion. Mol. Biol. Cell 18: 4050-4061.
4. Battini, L., et al. 2008. Loss of Polycystin-1 causes centrosome amplification and genomic instability. Hum. Mol. Genet 17: 2819-2833.
5. Distefano, G., et al. 2009. Polycystin-1 regulates extracellular signal-regulated kinase-dependent phosphorylation of tuberin to control cell size through mTOR and its downstream effectors S6K and 4E-BP1. Mol. Cell. Biol. 29: 2359-2371.
6. Biswas, M.H., et al. 2010. Protein kinase D1 inhibits cell proliferation through matrix metalloproteinase-2 and matrix metalloproteinase-9 secretion in prostate cancer. Cancer Res. 70: 2095-2104.
7. Du, C., et al. 2010. Protein kinase D1 suppresses epithelial-to-mesenchymal transition through phosphorylation of snail. Cancer Res. 70: 7810-7819.

RESEARCH USE

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