SANTA CRUZ BIOTECHNOLOGY, INC.

Polycystin-1 (M-20): sc-10374

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.

REFERENCES

1. Huan, Y., et al. 1999. Polycystin-1, the PKD1 gene product, is in a complex containing E-cadherin and the catenins. J. Clin. Invest. 104: 1459-1468.
2. Ong, A.C., et al. 1999. Coordinate expression of the autosomal dominant polycystic kidney disease proteins, Polycystin-2 and Polycystin-1, in normal and cystic tissue. Am. J. Pathol. 154: 1721-1729.
3. Wilson, P.D., et al. 1999. The PKD1 gene product, "Polycystin-1," is a tyrosine-phosphorylated protein that colocalizes with alpha2beta1-Integrin in focal clusters in adherent renal epithelia. Lab. Invest. 79: 1311-1323.
4. Arnould, T., et al. 1999. Cellular activation triggered by the autosomal dominant polycystic kidney disease gene product PKD2. Mol. Cell. Biol. 19: 3423-3434.
5. Kim, U.K., et al. 2000. Novel mutations of the PKD1 gene in Korean patients with autosomal dominant polycystic kidney disease. Mutat. Res. 432: 39-45.

SOURCE

Polycystin-1 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Polycystin-1 of mouse 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-10374 P, (100 µg 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.

RESEARCH USE

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

PROTOCOLS

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

APPLICATIONS

Polycystin-1 (M-20) is recommended for detection of Polycystin-1 of mouse and rat origin by mmunofluorescence (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 (m): sc-40862, Polycystin-1 shRNA Plasmid (m): sc-40862-SH and Polycystin-1 shRNA (m) Lentiviral Particles: sc-40862-V.

Molecular Weight of Polycystin-1: 485 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) 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.

SELECT PRODUCT CITATIONS

1. Riol-Blanco, L., et al. 2004. The neuronal protein Kidins220 localizes in a raft compartment at the leading edge of motile immature dendritic cells. Eur. J. Immunol. 34: 108-118.
2. Nakaya M.A., et al. 2005. Wnt3a links left-right determination with segmentation and anteroposterior axis elongation. Development 132: 5425-5436.
3. Tian, Y., et al. 2007. TAZ promotes PC2 degradation through a SCFβ-TrFCP E3 ligase complex. Mol. Cell. Biol. 27: 6383-6395.