

Polycystin-1 (H-260): sc-25570

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

- 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.
- 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.
- Wilson, P.D., et al. 1999. The PKD1 gene product, "Polycystin-1," is a tyrosine-phosphorylated protein that colocalizes with $\alpha\beta$ 1-Integrin in focal clusters in adherent renal epithelia. *Lab. Invest.* 79: 1311-1323.
- Arnould, T., et al. 1999. Cellular activation triggered by the autosomal dominant polycystic kidney disease gene product PKD2. *Mol. Cell. Biol.* 19: 3423-3434.

CHROMOSOMAL LOCATION

Genetic locus: PKD1 (human) mapping to 16p13.3; Pkd1 (mouse) mapping to 17 A3.3.

SOURCE

Polycystin-1 (H-260) is a rabbit polyclonal antibody raised against amino acids 4044-4303 of Polycystin-1 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.

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 (H-260) is recommended for detection of Polycystin-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 siRNA (m): sc-40862, Polycystin-1 shRNA Plasmid (h): sc-40861-SH, Polycystin-1 shRNA Plasmid (m): sc-40862-SH, Polycystin-1 shRNA (h) Lentiviral Particles: sc-40861-V 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) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Tian, Y., et al. 2007. TAZ promotes PC2 degradation through a SCF β -TrCP E3 ligase complex. *Mol. Cell. Biol.* 27: 6383-6395.
- Lu, C.J., et al. 2008. Non-random distribution and sensory functions of primary cilia in vascular smooth muscle cells. *Kidney Blood Press. Res.* 31: 171-184.
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- Ng, K.P., et al. 2011. p53 Independent epigenetic-differentiation treatment in xenotransplant models of acute myeloid leukemia. *Leukemia* 25: 1739-1750.
- Nixon, B., et al. 2011. Proteomic and functional analysis of human sperm detergent resistant membranes. *J. Cell. Physiol.* 226: 2651-2665.


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Try **Polycystin-1 (7E12): sc-130554**, our highly recommended monoclonal alternative to Polycystin-1 (H-260). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Polycystin-1 (7E12): sc-130554**.