

# Polycystin-2 (H-280): sc-25749

## 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. Polycystin-2 (PKD2), an integral membrane glycoprotein, is mutated in approximately 15% of patients with ADPKD. Polycystin-2 is expressed in medullary collecting ducts, cortical collecting ducts and distal convoluted tubules of kidney. It associates with Hax-1 and may be involved in cell-matrix interactions. Polycystin-1 and Polycystin-2 display significant homology within their transmembrane region and are thought to interact in order to enhance AP-1 expression, which regulates cell proliferation, differentiation and apoptosis. These findings suggest that mutations in Polycystin-2 may facilitate the development of renal tubular cysts.

## CHROMOSOMAL LOCATION

Genetic locus: PKD2 (human) mapping to 4q22.1; Pkd2 (mouse) mapping to 5 E5.

## SOURCE

Polycystin-2 (H-280) is a rabbit polyclonal antibody raised against amino acids 689-968 of Polycystin-2 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.

## STORAGE

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

## APPLICATIONS

Polycystin-2 (H-280) is recommended for detection of Polycystin-2 of mouse, rat and 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).

Polycystin-2 (H-280) is also recommended for detection of Polycystin-2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Polycystin-2 siRNA (h): sc-40863, Polycystin-2 siRNA (m): sc-40864, Polycystin-2 shRNA Plasmid (h): sc-40863-SH, Polycystin-2 shRNA Plasmid (m): sc-40864-SH, Polycystin-2 shRNA (h) Lentiviral Particles: sc-40863-V and Polycystin-2 shRNA (m) Lentiviral Particles: sc-40864-V.

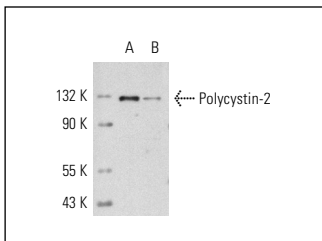
Molecular Weight of Polycystin-2: 130 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, Caki-1 cell lysate: sc-2224 or KNRK whole cell lysate: sc-2214.

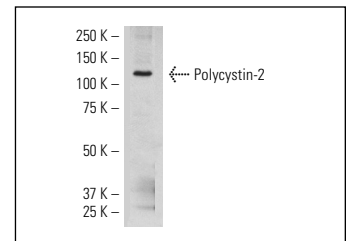
## RECOMMENDED SECONDARY REAGENTS

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.

## DATA



Polycystin-2 (H-280): sc-25749. Western blot analysis of Polycystin-2 expression in Caki-1 (A) and KNRK (B) whole cell lysates.



Polycystin-2 (H-280): sc-25749. Western blot analysis of Polycystin-2 expression in MIA PaCa-2 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Chen, X.Z., et al. 2008. Submembrane microtubule cytoskeleton: interaction of TRPP2 with the cell cytoskeleton. *FEBS J.* 275: 4675-4683.
- 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.
- Du, H., et al. 2010. Phenylephrine induces elevated RhoA activation and smooth muscle  $\alpha$ -actin expression in Pkd2<sup>+/-</sup> vascular smooth muscle cells. *Hypertens. Res.* 33: 37-42.
- Wann, A.K., et al. 2012. Primary cilia mediate mechanotransduction through control of ATP-induced Ca<sup>2+</sup> signaling in compressed chondrocytes. *FASEB J.* 26: 1663-1671.

## RESEARCH USE

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



Try **Polycystin-2 (YCE2): sc-47734** or **Polycystin-2 (D-3): sc-28331**, our highly recommended monoclonal alternatives to Polycystin-2 (H-280). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Polycystin-2 (YCE2): sc-47734**.