

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Polycystin-1/PKD1 in direct ELISAs.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human Polycystin-1/PKD1 Gly4142-Thr4303 Accession # P98161
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

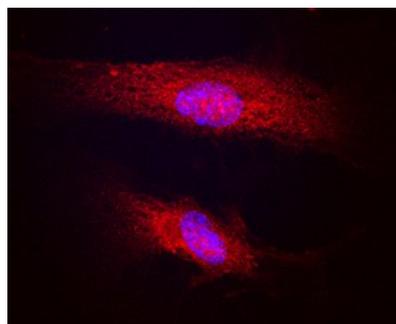
## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below

## DATA

### Immunocytochemistry



**Polycystin-1/PKD1 in Human HUVEC.** Polycystin-1/PKD1 was detected in immersion fixed HUVEC human umbilical vein endothelial cells using Sheep Anti-Human Polycystin-1/PKD1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6270) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to cell membranes, cytoplasm and endoplasmic reticula. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.2 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Polycystin-1 (also PKD1) is a 500-550 kDa member of the polycystin family of proteins. It is expressed in renal tubule primary cilia, and the membrane region that forms adherens junctions. Polycystin-1 binds to polycystin-2, promoting its insertion into the cell membrane, and regulating its calcium channel activity. In conjunction with polycystin-2, it detects fluid flow and converts this information into calcium signals. It also exists in the ER, where it negatively modulates polycystin-2 mediated calcium release. Mature human polycystin-1 is a 4280 amino acid (aa), 11 transmembrane glycoprotein. Its N-terminal extracellular region (aa 24-3074) is highly modular, and contains a C-type lectin domain, multiple Leu-rich repeats and PKD domains, one GPS region and a PLAT, REJ, WSC and LDLR domain. The cytoplasmic C-terminus (aa 4107-4303) contains a polycystin-2 coiled-coil interaction domain (aa 4220-4251). A percentage of polycystin-1 undergoes autoproteolysis after Leu3048, generating a presumed N-terminal fragment of ~ 350-400 kDa, and a membrane-bound C-terminal fragment of 150 kDa. Over aa 4141-4303, human polycystin-1 shares 71% aa identity with mouse polycystin-1.