ARG65025
anti-PKD2 / Polycystin 2 antibody

Package: 100 µg
Store at: -20°C

Summary

Product Description	Goat Polyclonal antibody recognizes PKD2 / Polycystin 2
Tested Reactivity	Hu
Predict Reactivity	Ms, Rat, Cow
Tested Application	WB
Host	Goat
Clonality	Polyclonal
Isotype	IgG
Target Name	PKD2 / Polycystin 2
Species	Human
Immunogen	C-ERAKLKRREVLGR
Conjugation	Un-conjugated
Alternate Names	Polycystwin; APKD2; Autosomal dominant polycystic kidney disease type II protein; PC2; Pc-2; Polycystic kidney disease 2 protein; R48321; TRPP2; Polycystin-2; PKD4; Transient receptor potential cation channel subfamily P member 2

Application Instructions

Application table

Application	Dilution
WB	1 - 3 µg/ml

Application Note: WB: Recommend incubate at RT for 1h.
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

Form	Liquid
Purification	Purified from goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide.
Buffer	Tris saline (pH 7.3), 0.02% Sodium azide and 0.5% BSA
Preservative	0.02% Sodium azide
Stabilizer	0.5% BSA
Concentration	0.5 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Database links	GeneID: 5311 Human Swiss-port # Q13563 Human
Gene Symbol	PKD2
Gene Full Name	polycystin 2, transient receptor potential cation channel
Background	This gene encodes a member of the polycystin protein family. The encoded protein is a multi-pass membrane protein that functions as a calcium permeable cation channel, and is involved in calcium transport and calcium signaling in renal epithelial cells. This protein interacts with polycystin 1, and they may be partners in a common signaling cascade involved in tubular morphogenesis. Mutations in this gene are associated with autosomal dominant polycystic kidney disease type 2. [provided by RefSeq, Mar 2011]
Function	Component of a heteromeric calcium-permeable ion channel formed by PKD1 and PKD2 that is activated by interaction between PKD1 and a Wnt family member, such as WNT3A and WNT9B (PubMed:27214281). Can also form a functional, homotetrameric ion channel (PubMed:29899465). Functions as a cation channel involved in fluid-flow mechanosensation by the primary cilium in renal epithelium (PubMed:18695040). Functions as outward-rectifying K+ channel, but is also permeable to Ca2+, and to a much lesser degree also to Na+ (PubMed:11854751, PubMed:15692563, PubMed:27071085, PubMed:27991905). May contribute to the release of Ca2+ stores from the endoplasmic reticulum (PubMed:11854751, PubMed:20881056). Together with TRPV4, forms mechano- and thermosensitive channels in cilium (PubMed:18695040). PKD1 and PKD2 may function through a common signaling pathway that is necessary to maintain the normal, differentiated state of renal tubule cells. Acts as a regulator of cilium length, together with PKD1. The dynamic control of cilium length is essential in the regulation of mechanotransductive signaling. The cilium length response creates a negative feedback loop whereby fluid shear-mediated deflection of the primary cilium, which decreases intracellular cAMP, leads to cilium shortening and thus decreases flow-induced signaling. Also involved in left-right axis specification via its role in sensing nodal flow; forms a complex with PKD1L1 in cilia to facilitate flow detection in left-right patterning. Detection of asymmetric nodal flow gives rise to a Ca2+ signal that is required for normal, asymmetric expression of genes involved in the specification of body left-right laterality. [UniProt]
Research Area	Metabolism antibody; Signaling Transduction antibody
Calculated Mw	110 kDa
PTM	Phosphorylated. Phosphorylation is important for protein function; a mutant that lacks the N-terminal phosphorylation sites cannot complement a zebrafish pkd2-deficient mutant (PubMed:16551655). PKD-mediated phosphorylation at the C-terminus regulates its function in the release of Ca(2+) stores from the endoplasmic reticulum (PubMed:20881056). PKA-mediated phosphorylation at a C-terminal site strongly increases the open probability of the channel, but does not increase single channel conductance (PubMed:26269590). N-glycosylated. The four subunits in a tetramer probably differ in the extent of glycosylation; simultaneous glycosylation of all experimentally validated sites would probably create steric hindrance. Thus, glycosylation at Asn-305 is not compatible with glycosylation at Asn-328; only one of these two residues is glycosylated at a given time.

Images

ARG65025 anti-PKD2 / Polycystin 2 antibody WB image

Western blot: 35 µg of HeLa cell lysate (in RIPA buffer) stained with ARG65025 anti-PKD2 / Polycystin 2 antibody at 1 µg/ml dilution and incubated at RT for 1 hour.