

Rabbit PKD2 Polyclonal Antibody | anti-PKD2 antibody

Phospho-PKD2(Ser812) Antibody

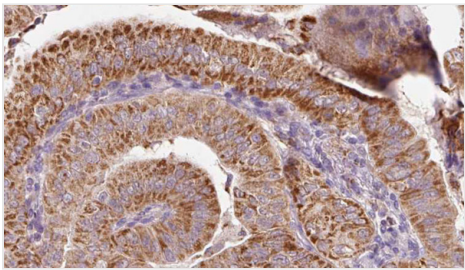
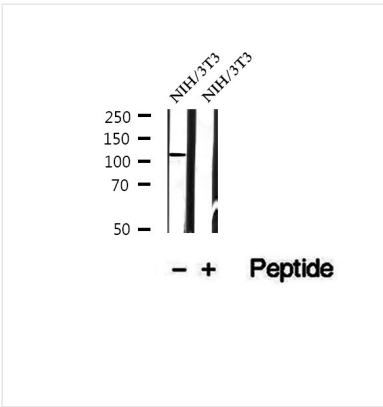
CATALOG # AAA321297	HOST Rabbit	REACTIVITY Human, Mouse, Rat	APPLICATIONS Immunohistochemistry, Western Blot
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PRODUCT SYNONYMS

PKD2; Polyclonal Antibody; Phospho-PKD2(Ser812) Antibody; APKD2; Autosomal dominant polycystic kidney disease type II; Autosomal dominant polycystic kidney disease type II protein; MGC138466; MGC138468; PC 2; PC2; PKD 2; PKD2_HUMAN; PKD4; Polycystic kidney disease 2 (autosomal dominant); Polycystic kidney disease 2; Polycystic kidney disease 2 protein; Polycystin 2; Polycystin 2 transient receptor potential cation channel; Polycystin-2; Polycystin2; Polycystwin; R48321; Transient receptor potential cation channel subfamily P member 2; TRPP2; anti-PKD2 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Phospho-PKD2(Ser812) antibody detects endogenous levels of PKD2.
Purity/Purification	From purified rabbit serum by affinity purification via sequential chromatography on phospho-and non-phospho-peptide affinity columns.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	968
Applicable Applications for anti-PKD2 antibody	IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human PKD2 around the phosphorylation site of Ser812.
Subcellular Location	Membrane. Endoplasmic Reticulum.
Tissue Specificity	Detected in fetal and adult kidney (PubMed:10770959). Detected at the thick ascending limb of the loop of Henle, at distal tubules, including the distal convoluted tubule and cortical collecting tubules, with weak staining of the collecting duct (PubMed:10770959). Detected on placenta syncytiotrophoblasts (at protein level) (PubMed:26269590). Strongly expressed in ovary, fetal and adult kidney, testis, and small intestine. Not detected in peripheral leukocytes.
Predicted Cross Reactivity	Horse, Rabbit, Dog, Xenopus
Similarity	Horse (100%), Rabbit (100%), Dog (100%), Xenopus (100%)
Conjugation	Unconjugated
Epitope	Phospho Ser812
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IHC (Immunohistochemistry)
AAA321297 at 1/100 staining Human thyroid cancer tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

WB (Western Blot)
Western blot analysis of extracts of NIH/3T3 cells, using Phospho-PKD2(Ser812) Antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-PKD2 antibody

Function: 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 (By similarity).

Subunit Structure: Homotetramer (PubMed:20881056, PubMed:27768895, PubMed:27991905, PubMed:28092368). Interacts with PKD1, giving rise to a complex formed by one PKD1 chain and a PKD2 homooligomer (PubMed:20881056, PubMed:19556541). In vitro results suggest assembly of a complex composed of one PKD1 chain and a PKD2 trimer; the physiological significance of this is uncertain (PubMed:19556541). Isoform 1 interacts with PKD1 while isoform 3 does not (By similarity). Interacts with PKD1L1. PKD1 requires the presence of PKD2 for stable expression (By similarity). Interacts with CD2AP (PubMed:10913159). Interacts with HAX1 (PubMed:10760273). Interacts with NEK8 (By similarity). Part of a complex containing AKAP5, ADCY5, ADCY6 and PDE4C (By similarity). Interacts (via C-terminus) with TRPV4 (via C-terminus) (PubMed:18695040). Interacts (via C-terminal acidic region) with PACS1 and PACS2; these interactions retain the protein in the endoplasmic reticulum and prevent trafficking to the cell membrane (PubMed:15692563).

Post-translational Modifications: 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 Ca²⁺ 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.

Similarity: The C-terminal coiled-coil domain is involved in oligomerization and the interaction with PKD1 (PubMed:18694932, PubMed:19556541). The isolated coiled-coil domain forms a homotrimer in vitro; the homotrimer interacts with a single PKD1 chain (PubMed:19556541). The coiled-coil domain binds calcium and undergoes a calcium-induced conformation change (in vitro) (PubMed:18694932). Belongs to the polycystin family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	4505835
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NCBI GeneID	5311
NCBI Accession #	NP_000288.1
NCBI GenBank Nucleotide #	NM_000297.3
UniProt Accession #	Q13563 ; O60441 ; Q15764 ; Q2M1Q3 ; Q2M1Q5
Molecular Weight	Observed: 115 kDa Predicted: 110 kDa
NCBI Official Full Name	polycystin-2
NCBI Official Synonym Full Names	polycystin 2, transient receptor potential cation channel
NCBI Official Symbol	PKD2
NCBI Official Synonym Symbols	PC2; PKD4; Pc-2; APKD2; TRPP2
NCBI Protein Information	polycystin-2
UniProt Protein Name	Polycystin-2
UniProt Gene Name	PKD2
UniProt Synonym Gene Names	TRPP21 PublicationManual assertion based on opinion iniRef.22; PC2

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/polyclonal/pkd2-antibody-immunohistochemistry-western-blot-elisa/321297>