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PKD2L1 Rabbit pAb

Catalog # AP97251

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q9P0L9
Other Accession	Q9P0L9
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	91982
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human PKD2L1
Epitope Specificity	1-100/805
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the polycystin family.
SUBUNIT	Homotrimer; trimerization is independent of calcium-binding. Calcium channels are probably composed of 3 subunit of PKD2L1 and 1 subunit of some PKD1 protein (PKD1, PKD1L1, PKD1L2 or PKDL3). Interacts with PKD1. Interacts with PKD1L1; to form ciliary calcium channel. Interacts with PKD1L3, to form putative sour taste receptor. Interacts with RACK1; inhibits the channel activity possibly by impairing localization to the cell membrane.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene encodes a member of the polycystin protein family. The encoded protein contains multiple transmembrane domains, and cytoplasmic N- and C-termini. The protein may be an integral membrane protein involved in cell-cell/matrix interactions. This protein functions as a calcium-regulated nonselective cation channel. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Dec 2011]

Additional Information

Gene ID	9033
Other Names	PCL; PKD2L; PKDL; TRPP3; B830002B15; PK2L1_HUMAN; PKD2L1; Polycystin-2L1; Polycystic kidney disease 2-like 1 protein; Polycystin-2 homolog; Polycystin-L; Polycystin-L1; PK2L1_MOUSE; polycystin 2 like 1, transient receptor potential cation channel; polycystic kidney disease 2-like 1; transient receptor potential cation channel, subfamily P, member 3
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody

is stable for at least two weeks at 2-4 °C.

Protein Information

Name	PKD2L1 (HGNC:9011)
Function	Homotetrameric, non-selective cation channel that is permeable to sodium, potassium, magnesium and calcium (PubMed:10517637, PubMed:11959145, PubMed:25820328, PubMed:27754867, PubMed:29425510, PubMed:30004384). Also forms functional heteromeric channels with PKD1, PKD1L1 and PKD1L3 (PubMed:23212381, PubMed:24336289). Pore-forming subunit of a heterotetrameric, non-selective cation channel, formed by PKD1L2 and PKD1L3, that is permeable to sodium, potassium, magnesium and calcium and which may act as a sour taste receptor in gustatory cells; however, its contribution to sour taste perception is unclear in vivo and may be indirect (PubMed:19812697, PubMed:23212381). The homomeric and heteromeric channels formed by PKD1L2 and PKD1L3 are activated by low pH and Ca(2+), but opens only when the extracellular pH rises again and after the removal of acid stimulus (PubMed:23212381). Pore-forming subunit of a calcium-permeant ion channel formed by PKD1L2 and PKD1L1 in primary cilia, where it controls cilium calcium concentration, without affecting cytoplasmic calcium concentration, and regulates sonic hedgehog/SHH signaling and GLI2 transcription (PubMed:24336289). The PKD1L1:PKD2L1 complex channel is mechanosensitive only at high pressures and is highly temperature sensitive (PubMed:24336289). Pore-forming subunit of a calcium-permeant ion channel formed by PKD1L2 and PKD1 that produces a transient increase in intracellular calcium concentration upon hypo-osmotic stimulation (200 mOsm) (By similarity). May play a role in the perception of carbonation taste (By similarity). May play a role in the sensory perception of water, via a mechanism that activates the channel in response to dilution of salivary bicarbonate and changes in salivary pH (By similarity).
Cellular Location	Cell projection, cilium membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein. Cytoplasmic vesicle {ECO:0000250|UniProtKB:A2A259}. Note=Interaction with PKD1L3 is required for localization to the cell membrane (PubMed:23212381) Interaction with PKD1 is required for localization to the cell membrane (By similarity). {ECO:0000250|UniProtKB:A2A259, ECO:0000269|PubMed:23212381}
Tissue Location	Detected in taste bud cells in fungiform papillae (at protein level) (PubMed:19812697). Ubiquitous (PubMed:9748274) Expressed in adult heart, skeletal muscle, brain, spleen, testis, retina and liver (PubMed:9748274, PubMed:9878261). Isoform 4 appears to be expressed only in transformed lymphoblasts

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