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Product datasheet for MC222866

Pkd2 (NM_008861) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Pkd2 (NM_008861) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Pkd2
Synonyms:	C030034P18Rik; PC2; TRPP2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

Fully Sequenced ORF:

>MC222866 representing NM_008861
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGTTAACTCCAGACGCGTGCAGCCGCAGCCGCCCGGGGACGCGGGACGCTCGCCCGCGCCGCGAGCGT
CCGGACCCGGGCGCCTGGTGGCGGGAGGCGCCGGCCTAGCTGTCCCCGGCGGCCTCGGGGAGCAGCGGGG
CCTGGAGATCGAGATGGAGCGCATCCGGCAGGCGGCCGCTCGGGATCCCCCGGCCGGAGCCTCGGCCTCG
CCGTCTCCTCCGCTTTCGTCCTGCTCCAGGCAAGCGTGGAGCCGCGACAACCCGGGCTTTGAGGCAGAGG
AGGATGACGACGACGACGAGGTGGAAGGAGAAGAAGGAGGGATGGTGGTAGAGATGGATGTGGAGTGGCG
CCCGGGCAGTCGGAGGTCGGCCTCCTCCTCGGCCGTGAGCTCGGTGGGCGCCCGCGGCCGAGGGCTCGGG
AGCTACCGCGGCGCGGCTCACCTGAGCGGGAGGCGGCGCCGGCTAGAGGACCAGGGCGCGCAGTGTCCCA
GCCCCGCGGGCGGCGGGGACCCGCTGCATCGCCACCTCCCGCTGGAGGGCCAGCCACCCCGAGTGGCCTG
GGCAGAGAGGCTGGTGCGAGGGCTGCGAGGTCTCTGGGGAACAAGACTCATGGAAGAGAGCAACGCCAAC
CGAGAGAAGTACCTGAAAAGTGTGTTACGGGAGCTGGTCACTTACCTCTTTTTCCTCGTAGTCTTGTGCA
TCTTGACCTACGGCATGATGAGCTCCAATGTGTACTACTACACTCGGACACTGTCACAGCTATTCATAGA
CACCCCAGTGTCGAAAACAGAGAAAACCAACTTTAAAACTCTTTCTTCCATGGAGGACTTCTGGAAGTTC
ACCGAAGGCTCCTTCCTGGATGGGCTGTACTGGAAGGCACAGACCAGCAACCACACGCAAGCTGACAACC
GAAGCTTTATCTTCTATGAGAACCTGCTGCTAGGAGTGCCGCGTCTACGCCAACTCCGAGTCAGAAACGG
ATCCTGCTCCATCCCTCAGGACCTGCGAGATGAAATTAAAGAGTGCTATGACGTCTACTCCGTCAGCAGT
GAGGACAGAGCTCCATTTGGACCGCGGAATGGAACTGCGTGGATGTACACAAGTGAGAAGGAGCTGAATG
GGAGCAGTCACTGGGGGATCATTGCGTCGTACAGTGGAGCGGGTTACTACCTGGATCTGTCCAGAACCAG
GGAGGAGACAGCAGCCCAGCTTGCTGGCCTCAGGAGGAACTTCTGGCTGGACCGGGGCACGCGGGCAGCT
TTTATAGACTTCTCGGTGTATAACGCAAACATTAACCTGTTCTGTGTGGTCAGGTTATTGGCGGAGTTCC
CAGCAACGGGTGGCGTGGTACCCTCTTGGCAGTTTCAGCCTGTAAAACTGATCCGCTATGTCACAGCCTT
TGATTTCTTCCTGGCAGCCTGTGAGATCATCTTTTGTTTCTTTATCATTTACTATGTGGTGGAAGAGATA
TTGGAAATTCGGATTCACAGACTGAGCTATTTCAGGAGTTTCTGGAATTGTCTGGATGTTGTGATTGTCG
TGTTATCTGTAGTAGCTATGGTGATTAACATTTACCGAATGTCAAATGCAGAGGGGCTGCTACAGTTTCT
TGAAGATCAAAATTCTTTCCCCAACTTTGAGCATGTGGCATACTGGCAAATACAGTTCAACAATATAAGT
GCTGTCATGGTATTTTTGGTCTGGATTAAGCTCTTCAAATTCATCAATTTTAATAGGACCATGAGCCAGC
TCTCCACAACCATGTCTCGATGTGCCAAAGACCTCTTCGGCTTCACCATAATGTTCTCCATCATCTTCTT
GGCATACGCACAGCTGGCATACCTTGTCTTCGGCACCCAGGTCGATGACTTCAGCACTTTCCAAGAATGT
ATCTTCACCCAGTTCCGCATCATTTTGGGTGATATCAACTTCGCAGAGATCGAGGAAGCTAACCGAGTTT
TGGGGCCACTTTATTTTACTACATTTGTGTTCTTTATGTTCTTCATTCTTTTGAATATGTTCCTGGCGAT
CATCAATGATTCGTACTCTGAAGTGAAATCCGATCTGGCCCAGCAGAAAGCAGAAATGGAACTCTCAGAC
CTTATCAGAAAGGGCTGCCAAAAAGCACTGGTCAAACTAAAACTGAAAAGAAACACTGTAGATGCCATCT
CAGAGAGTCTCCGGCAAGGTGGTGGCAAACTGAACTTTGATGAGCTTCGGCAAGACCTGAAAGGGAAGGG
CCATACAGATGCAGAGATTGAGGCCATATTCACTAAATATGACCAGGATGGCGACCAGGAACTGACCGAG
CGTGAGCATCAACAGATGAGAGATGACTTGGAGAAAGAGAGGGAGGACCTAGACTTGGAACACAGCTCTT
TACCACGTCCGATGAGCAGCAGAAGTTTCCCCAGAAGCCTGGATGACTCCGAGGAGGAGGATGACGAAGA
CAGTGGCCATAGCTCCAGGAGGAGGGGAAGCATCTCCAGTGGGGTTTCCTATGAAGAGTTCCAAGTACTG
GTGAGGCGCGTGGACCGCATGGAGCACTCCATTGGCAGCATCGTTTCCAAGATTGATGCCGTGATTGTCA
AGCTGGAGATCATGGAGCGGGCCAAGCTGAAGAGACGAGAGGTGTTAGGACGGCTGCTGGATGGCGTGGC
TGAGGATGCGCGACTGGGTCGGGACAGTGAGATCCACAGGGAGCAGATGGAGCGCCTGGTGCGGGAAGAG
CTGGAGCGCTGGGAATCGGATGATGCAGCTTCGCAAACAGGTCATGGTGTAAGCACACAAGTGGGACTCG
GTGGCCAGCCCCACCCCAGAAACCCGCGCCCTCCTTCCTCCCAGTCTGCAGAGGGCCTGGAAGGTGGAGG
TGGAAATGGAAGTGCCAACGTCCATGCCTAA

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:	SgfI-RsrII
ACCN:	NM_008861
Insert Size:	2901 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	1. Centrifuge at 5,000xg for 5min. 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA. 3. Close the tube and incubate for 10 minutes at room temperature. 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom. 5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_008861.3, NP_032887.3
RefSeq Size:	5221 bp
RefSeq ORF:	2901 bp
Locus ID:	18764
UniProt ID:	O35245
Cytogenetics:	5 50.68 cM

Gene Summary: 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. Can also form a functional, homotetrameric ion channel (PubMed:27214281). Functions as a cation channel involved in fluid-flow mechanosensation by the primary cilium in renal epithelium (PubMed:12514735, PubMed:18695040, PubMed:27760766). Functions as outward-rectifying K(+) channel, but is also permeable to Ca(2+), and to a much lesser degree also to Na(+) (PubMed:27760766). May contribute to the release of Ca(2+) stores from the endoplasmic reticulum (By similarity). 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 (PubMed:9568711, PubMed:10615132). 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 (PubMed:20096584). 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 (PubMed:21307093, PubMed:22983710). Detection of asymmetric nodal flow gives rise to a Ca(2+) signal that is required for normal, asymmetric expression of genes involved in the specification of body left-right laterality (PubMed:12062060, PubMed:21307093, PubMed:22983710).[UniProtKB/Swiss-Prot Function]