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Product datasheet for MC229475

Kcnma1 (NM_001253369) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Kcnma1 (NM_001253369) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Kcnma1
Synonyms:	5730414M22Rik; BKCa; MaxiK; mSlo; mSlo1; Slo; Slo1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin

Fully Sequenced ORF:

>MC229475 representing NM_001253369
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCAAACGGTGGCGGCGGCGGCGGCGGCAGCAGCGGCGGCGGCGGCGGCGGCGGCGGAGGCAGCGGTC
TTAGAATGAGCAGCAATATCCACGCGAACCATCTCAGCCTAGACGCGTCCTCCTCCTCCTCTTCCTCCTC
CTCTTCTTCTTCTTCCTCCTCCTCTTCCTCCTCGTCCTCGGTCCACGAGCCCAAGATGGATGCGCTCATC
ATACCGGTGACCATGGAGGTGCCGTGCGACAGCCGGGGCCAACGCATGTGGTGGGCTTTCTTGGCCTCCT
CCATGGTGACTTTCTTCGGGGGCCTCTTCATCATCTTGCTCTGGCGGACGCTCAAGTACCTGTGGACCGT
TTGCTGCCACTGCGGGGGCAAGACGAAGGAGGCCCAGAAGATAAACAATGGCTCCAGCCAGGCAGATGGT
ACTCTCAAGCCAGTGGACGAAAAAGAGGAGGTGGTGGCAGCCGAGGTCGGCTGGATGACATCTGTGAAGG
ACTGGGCAGGGGTGATGATATCCGCCCAGACACTGACTGGCAGAGTCCTGGTTGTGTTAGTCTTTGCTCT
CAGCATTGGTGCCCTCGTAATATACTTCATAGACTCGTCAAACCCAATAGAATCCTGCCAGAATTTCTAC
AAAGATTTCACATTACAGATCGACATGGCTTTCAACGTGTTCTTCCTCCTCTACTTTGGCTTGCGGTTTA
TTGCAGCCAACGATAAGCTGTGGTTCTGGCTGGAAGTGAATTCAGTAGTAGATTTCTTCACAGTCCCTCC
TGTGTTTGTGTCTGTGTACTTAAACAGAAGTTGGCTTGGCTTGAGATTTTTAAGAGCTCTCAGACTGATA
CAGTTTTCAGAGATTTTGCAGTTTCTGAATATCCTTAAAACAAGTAACTCCATCAAGCTGGTGAATCTGC
TCTCCATATTTATCAGCACGTGGCTGACTGCAGCTGGATTCATCCACTTGGTGGAGAATTCAGGGGACCC
ATGGGAAAATTTCCAAAACAACCAGGCACTTACGTACTGGGAATGTGTCTACTTACTCATGGTCACAATG
TCTACAGTGGGTTATGGGGACGTTTATGCAAAAACCACACTTGGACGCCTCTTCATGGTCTTCTTCATCC
TCGGGGGACTGGCCATGTTTGCCAGCTACGTCCCTGAAATCATAGAGTTAATAGGAAACCGCAAGAAATA
CGGGGGCTCCTATAGCGCGGTTAGTGGAAGAAAGCACATTGTAGTCTGTGGACACATTACTCTGGAGAGT
GTCTCTAACTTCCTGAAGGACTTTCTGCACAAGGACCGGGATGATGTCAACGTGGAGATTGTCTTTCTTC
ACAACATCTCCCCTAACCTTGAGCTTGAGGCTCTGTTCAAACGGCATTTCACTCAGGTGGAGTTTTATCA
GGGCTCTGTCCTCAATCCACATGATCTTGCCAGAGTCAAGATAGAGTCAGCAGATGCATGCCTGATCCTT
GCCAATAAGTATTGCGCTGACCCGGATGCAGAAGATGCCTCCAACATCATGAGAGTGATCTCCATCAAAA

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ACTACCACCCAAAGATCAGGATCATCACTCAGATGCTGCAGTATCACAACAAGGCCCATCTGCTCAACAT
CCCCAGCTGGAACTGGAAAGAGGGTGATGACGCAATATGCCTTGCAGAGCTCAAGTTGGGTTTCATAGCC
CAGAGCTGTCTGGCTCAAGGCCTCTCCACAATGCTTGCCAATCTCTTCTCTATGAGGTCATTCATAAAGA
TTGAGGAAGACACATGGCAGAAATACTACTTGGAAGGAGTCTCCAATGAAATGTACACAGAATATCTCTC
CAGTGCCTTCGTGGGTCTGTCCTTCCCTACTGTTTGTGAGCTGTGTTTTGTGAAGCTTAAGCTCCTGATG
ATAGCCATTGAGTACAAGTCTGCCAACAGAGAGAGCCGAAGCCGAAAGCGAATATTAATTAACCCTGGGA
ACCACCTTAAGATCCAAGAAGGTACTTTAGGATTTTTCATCGCAAGTGATGCCAAAGAAGTTAAAAGGGC
ATTTTTTTACTGCAAGGCCTGTCATGATGACGTCACAGATCCCAAAAGAATTAAAAAATGTGGCTGCAGG
CGGCTTGAAGATGAGCAGCCGCCAACCCTGTCACCAAAAAAAAAACAACGTAATGGGGGCATGAGGAACT
CGCCCAACACCTCCCCGAAGCTGATGAGGCATGACCCCTTGTTAATTCCTGGCAATGATCAGATTGACAA
CATGGACTCCAATGTGAAAAAGTACGACTCCACTGGAATGTTTCACTGGTGTGCACCCAAGGAGATTGAG
AAAGTCATCTTGACTCGAAGTGAAGCTGCCATGACTGTCCTGAGTGGCCATGTCGTAGTCTGCATCTTTG
GGGATGTCAGCTCAGCCCTGATTGGCCTCCGGAACCTGGTGATGCCACTTCGTGCTAGCAACTTTCACTA
TCATGAGCTCAAACACATTGTGTTTGTGGGCTCCATTGAGTACCTCAAGAGGGAGTGGGAAACACTGCAC
AACTTCCCGAAAGTGTCCATATTGCCTGGTACACCATTAAGTCGGGCTGATTTAAGGGCTGTCAACATCA
ACCTCTGTGACATGTGCGTTATCCTGTCAGCCAATCAGAATAATATTGATGATACTTCGCTTCAGGACAA
GGAATGCATCTTGGCGTCACTCAACATCAAATCTATGCAGTTTGATGACAGCATCGGGGTCTTGCAGGCT
AATTCCCAAGGATTCACACCTCCTGGAATGGACAGATCATCACCCGACAACAGCCCAGTGCACGGGATGT
TACGCCAGCCGTCCATCACAACTGGGGTCAACATTCCCATCATCACGGAACTCGCTAAGCCGGGCAAGTT
GCCTTTGGTATCAGTCAATCAGGAAAAAAACAGTGGGACGCACATTCTAATGATAACGGAGTTGGTGAAT
GATACCAATGTTCAGTTTTTGGACCAAGACGATGACGATGACCCTGACACAGAGCTGTACCTCACACAGC
CCTTTGCTTGTGGGACAGCATTTGCCGTCAGCGTCCTGGACTCACTCATGAGCGCGACATACTTCAATGA
CAATATCCTCACCCTAATACGGACCCTGGTGACAGGAGGAGCCACACCAGAGCTCGAGGCTCTAATAGCT
GAGGAGAATGCACTTCGAGGAGGCTACAGCACTCCGCAGACATTGGCCAACAGGGACCGTTGCCGAGTGG
CCCAGTTAGCCCTGTTAGATGGTCCCTTTGCAGACTTAGGGGATGGTGGTTGTTATGGTGATCTGTTCTG
CAAAGCTCTGAAAACATATAATATGCTTTGTTTTGGAATTTACCGGCTGAGAGATGCCCACCTCAGCACC
CCCAGCCAGTGTACAAAAAGGTACGTCATCACCAATCCTCCCTACGAGTTTGAGCTCGTACCAACAGACC
TGATCTTCTGCCTGATGCAGTTTGACCACAACGCTGGCCAATCCCGGGCCAGTCTGTCTCATTCCTCCCA
CTCCTCACAGTCGTCCAGTAAGAAGAGCTCCTCCGTCCACTCCATCCCGTCCACAGCAAATCGGCCGAAC
CGGCCCAAGTCCAGGGAGTCCCGCGACAAACAGAACAGAAAAGAAATGGTTTACAGATGA

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: SgfI-RsrII

ACCN: NM_001253369

Insert Size: 3630 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).

OTI Annotation: Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.

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_001253369.1, NP_001240298.1

RefSeq Size: 5037 bp

RefSeq ORF: 3630 bp

Locus ID: 16531

UniProt ID: Q08460

Cytogenetics: 14 A3

Gene Summary: Potassium channel activated by both membrane depolarization or increase in cytosolic Ca(2+) that mediates export of K(+). It is also activated by the concentration of cytosolic Mg(2+). Its activation dampens the excitatory events that elevate the cytosolic Ca(2+) concentration and/or depolarize the cell membrane. It therefore contributes to repolarization of the membrane potential. Plays a key role in controlling excitability in a number of systems, such as regulation of the contraction of smooth muscle, the tuning of hair cells in the cochlea, regulation of transmitter release, and innate immunity. In smooth muscles, its activation by high level of Ca(2+), caused by ryanodine receptors in the sarcoplasmic reticulum, regulates the membrane potential. In cochlea cells, its number and kinetic properties partly determine the characteristic frequency of each hair cell and thereby helps to establish a tonotopic map. Kinetics of KCNMA1 channels are determined by alternative splicing, phosphorylation status and its combination with modulating beta subunits. Highly sensitive to both iberiotoxin (IbTx) and charybdotoxin (CTX).[UniProtKB/Swiss-Prot Function]
Transcript Variant: This variant (13) has multiple differences in the coding region, one of which results in a frameshift, compared to variant 1. The resulting isoform (13) is shorter and has a distinct C-terminus, compared to isoform 1.