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Product datasheet for SC122078

KCNMA1 (NM_002247) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KCNMA1 (NM_002247) Human Untagged Clone
Tag:	Tag Free
Symbol:	KCNMA1
Synonyms:	bA205K10.1; BKTM; CADEDS; hSlo; IEG16; KCa1.1; LIWAS; MaxiK; mSLO1; PNKD3; SAKCA; SLO; SLO-ALPHA; SLO1
Mammalian Cell Selection:	None
Vector:	pCMV6-XL4
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_002247, the custom clone sequence may differ by one or more nucleotides

ATGGCAAATGGTGGCGGCGGCGGCGGCGGCAGCAGCGGCGGCGGCGGCGGCGGCGGAGGCAGCAGTCTTA
GAATGAGTAGCAATATCCACGCGAACCATCTCAGCCTAGACGCGTCCTCCTCCTCCTCCTCCTCCTCTTC
CTCTTCTTCTTCTTCCTCCTCCTCTTCCTCCTCGTCCTCGGTCCACGAGCCCAAGATGGATGCGCTCATC
ATCCCGGTGACCATGGAGGTGCCGTGCGACAGCCGGGGCCAACGCATGTGGTGGGCTTTCCTGGCCTCCT
CCATGGTGACTTTCTTCGGGGGCCTCTTCATCATCTTGCTCTGGCGGACGCTCAAGTACCTGTGGACCGT
GTGCTGCCACTGCGGGGGCAAGACGAAGGAGGCCCAGAAGATTAACAATGGCTCAAGCCAGGCGGATGGC
ACTCTCAAACCAGTGGATGAAAAAGAGGAGGCAGTGGCCGCCGAGGTCGGCTGGATGACCTCCGTGAAGG
ACTGGGCGGGGGTGATGATATCCGCCCAGACACTGACTGGCAGAGTCCTGGTTGTCTTAGTCTTTGCTCT
CAGCATCGGTGCACTTGTAATATACTTCATAGATTCATCAAACCCAATAGAATCCTGCCAGAATTTCTAC
AAAGATTTCACATTACAGATCGACATGGCTTTCAACGTGTTCTTCCTTCTCTACTTCGGCTTGCGGTTTA
TTGCAGCCAACGATAAATTGTGGTTCTGGCTGGAAGTGAACTCTGTAGTGGATTTCTTCACGGTGCCCCC
CGTGTTTGTGTCTGTGTACTTAAACAGAAGTTGGCTTGGTTTGAGATTTTTAAGAGCTCTGAGACTGATA
CAGTTTTCAGAAATTTTGCAGTTTCTGAATATTCTTAAAACAAGTAATTCCATCAAGCTGGTGAATCTGC
TCTCCATATTTATCAGCACGTGGCTGACTGCAGCCGGGTTCATCCATTTGGTGGAGAATTCAGGGGACCC
ATGGGAAAATTTCCAAAACAACCAGGCTCTCACCTACTGGGAATGTGTCTATTTACTCATGGTCACAATG
TCCACCGTTGGTTATGGGGATGTTTATGCAAAAACCACACTTGGGCGCCTCTTCATGGTCTTCTTCATCC
TCGGGGGACTGGCCATGTTTGCCAGCTACGTCCCTGAAATCATAGAGTTAATAGGAAACCGCAAGAAATA
CGGGGGCTCCTATAGTGCGGTTAGTGGAAGAAAGCACATTGTGGTCTGCGGACACATCACTCTGGAGAGT
GTTTCCAACTTCCTGAAGGACTTTCTGCACAAGGACCGGGATGACGTCAATGTGGAGATCGTTTTTCTTC
ACAACATCTCCCCCAACCTGGAGCTTGAAGCTCTGTTCAAACGACATTTTACTCAGGTGGAATTTTATCA
GGGTTCCGTCCTCAATCCACATGATCTTGCAAGAGTCAAGATAGAGTCAGCAGATGCATGCCTGATCCTT
GCCAACAAGTACTGCGCTGACCCGGATGCGGAGGATGCCTCGAATATCATGAGAGTAATCTCCATAAAGA

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ACTACCATCCGAAGATAAGAATCATCACTCAAATGCTGCAGTATCACAACAAGGCCCATCTGCTAAACAT
CCCGAGCTGGAATTGGAAAGAAGGTGATGACGCAATCTGCCTCGCAGAGTTGAAGTTGGGCTTCATAGCC
CAGAGCTGCCTGGCTCAAGGCCTCTCCACCATGCTTGCCAACCTCTTCTCCATGAGGTCATTCATAAAGA
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CAGTGCCTTCGTGGGTCTGTCCTTCCCTACTGTTTGTGAGCTGTGTTTTGTGAAGCTCAAGCTCCTAATG
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GGCGTCACTCAACATCAAATCTATGCAGTTTGATGACAGCATCGGAGTCTTGCAGGCTAATTCCCAAGGG
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CCATCACAACTGGGGTCAACATCCCCATCATCACTGAACTAGTGAACGATACTAATGTTCAGTTTTTGGA
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CCCTGGTGACCGGAGGAGCCACGCCGGAGCTGGAGGCTCTGATTGCTGAGGAAAACGCCCTTAGAGGTGG
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AGAGCTCCTCTGTTCACTCCATCCCATCCACAGCAAACCGACAGAACCGGCCCAAGTCCAGGGAGTCCCG
GGACAAACAGAAGTACGTGCAGGAAGAGCGGCTTTGA

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_002247 unedited
GGCGGCCGCGAATTCGGCACCAGCCCTGCGCCGGCTGCCCGTTGCTAGCTATGGCAAATG
GTGGCGGCGGCGGCGGCGGCAGCAGCGGCGGCGGCGGCGGCGGCGGAGGCAGCAGTCTTA
GAATGAGTAGCAATATCCACGCGAACCATCTCAGCCTAGACGCGTCCTCCTCCTCCTCCT
CCTCCTCTTCCTCTTCTTCTTCTTCCTCCTCCTCTTCCTCCTCGTCCTCGGTCCACGAGC
CCAAGATGGATGCGCTCATCATCCCGGTGACCATGGAGGTGCCGTGCGACAGCCGGGGCC
AACGCATGTGGTGGGCTTTCCTGGCCTCCTCCATGGTGACTTTCTTCGGGGGCCTCTTCA
TCATCTTGCTCTGGCGGACGCTCAAGTACCTGTGGACCGTGTGCTGCCACTGCGGGGGCA
AGACGAAGGAGGCCCAGAAGATTAACAATGGCTCAAGCCAGGCGGATGGCACTCTCAAAC
CAGTGGATGAAAAAGAGGAGGCAGTGGCCGCCGAGGTCGGCTGGATGACCTCCGTGAAGG
ACTGGGCGGGGGTGATGATATCCGCCCAGACACTGACTGGCAGAGTCCTGGCTGTCTTAG
TCTTTGCTCTCAGCATCGGTGCACTTGTAATATACTTCATAGATTCATCANACCCAATAG
AATCCTGCCAGAATTTCTACAAAGATTTCACATTACAGATCGA

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_002247 unedited
CCCCCCTGACTTGGACCGCGGNCCGCATCCTACGACGCGGTTTTTTTTTTTTTTTTTTGG
AACTCCTTTTTTTTTAATTTCACAAAAGTTTTCACACGGACAACGTTATAGAAGAAAACC
CCCAGCAGTGGCTAGGTCATGCAGAACCATTAATTGTCATACCTTGGCCCATTCTATTCA
TCCTTGTTGCACTTTAGAGAGAGAAGTAAGCTATGTGAGTTTTACAATGCTTTTAAACTG
TCATATTTCCTGTTGAGCACTTTAACTGGCACATTCTTATAGTTATAAATGTTCTGAGGG
CGTAACTTTATAACCTCCTTTGCAAAGAATGCATGAAGAGCTCTTCATGATCCAATACTA
GGGGATACATATATATAGTTATATATATAGTTATATATATATAATTATATAGTTATATAT
ATATAATTATATATAGTTTATATAAAGAGATAGTTATACATAATATAAATCAATATATAG
AGGGACAAAAATAATTTGAAAAAATTCTTCCACTCATAGGGCTTGATAATTTACATGTAT
ACAATTATTCCCCACCACAATACTGGTTTGAATACTACGCTGCCCCTGTCTTTGGTGTGG
GGGAGGGTGGGAGGGCTCTCCCTGACCCCCCCCCATCGCTCATCAACACCGCTTTGCCTC
CTTCTCCACAGGACGCCCCAATCCCCCACTCTCACGCTTTGCGGCCACCTTGTATCCCCA
CCCCCACCCCCACCTCCTCACATCCCCAACCCTCTATTCCCACGGGGCACCCACGTGACC
CGCTCCCCCCCCCCCTTTTCCCCCTACTCTATCCCCGCCCTCCCCCTCCCACTCACCCTC
TCCCCTTCCCTCACCCCCTGCCTTTTTCATCCTATACTGCAATATTGTACATCCCAACCT
CCACCACCATCTCCCTCCCACCCACCCCTCCACGTCCA

Restriction Sites: NotI-NotI

ACCN: NM_002247

Insert Size: 6100 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info

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_002247.2, NP_002238.2

RefSeq Size: 6103 bp

RefSeq ORF:	3537 bp
Locus ID:	3778
UniProt ID:	Q12791
Cytogenetics:	10q22.3
Domains:	BK_channel_a, ion_trans
Protein Families:	Druggable Genome, Ion Channels: Potassium, Transmembrane
Protein Pathways:	Vascular smooth muscle contraction

Gene Summary: MaxiK channels are large conductance, voltage and calcium-sensitive potassium channels which are fundamental to the control of smooth muscle tone and neuronal excitability. MaxiK channels can be formed by 2 subunits: the pore-forming alpha subunit, which is the product of this gene, and the modulatory beta subunit. Intracellular calcium regulates the physical association between the alpha and beta subunits. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Jul 2008]
Transcript Variant: This variant (2) differs in the 3' UTR and has multiple coding region differences, compared to variant 1. The resulting isoform (b) contains a distinct C-terminus, compared to isoform a.