

Product datasheet for **MC229450**

Kcnma1 (NM_001253376) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Kcnma1 (NM_001253376) 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: >MC229450 representing NM_001253376
Red=Cloning site **Blue**=ORF **Orange**=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGGATCGC**C

ATGGCAAACGGTGGCGGGCGGGCGGGCAGCAGCGGGCGGGCGGGCGGGCGGGAGGCAGCGGTC
TTAGAATGAGCAGCAATATCCACGCGAACCATCTCAGCCTAGACGCGTCTCTCTCTCTCTCTCTCT
CTTTCTTCTTCTTCT
ATACCGGTGACCATGGAGGTGCCGTGCGACAGCCGGGGCCAACGCATGTGGTGGGCTTTCTTGGCCCTCT
CCATGGTGACTTTCTTGGGGCCTCTTCATCATCTTGTCTTGGCGGACGCTCAAGTACCTGTGGACCGT
TTGCTGCCACTGCGGGGCAAGACGAAGGAGGCCAGAAAGATAAACAATGGCTCCAGCCAGGCAGATGGT
ACTCTCAAGCCAGTGGACGAAAAAGAGGAGGTGGTGGCAGCCGAGGTCGGCTGGATGACATCTGTGAAGG
ACTGGCAGGGGTGATGATATCCGCCCAGACACTGACTGGCAGAGTCTGGTTGTGTTAGTCTTTGCTCT
CAGCATTGGTGCCTCGTAATACTTCATAGACTCGTCAAACCAATAGAATCCTGCCAGAATTTCTAC
AAAGATTTACATTACAGATCGACATGGCTTTCAACGTGTTCTTCCTCTACTTTGGCTTCGGGTTTA
TTGCAGCCAACGATAAGCTGTGGTTCTGGCTGGAAGTGAATTCAGTAGATTCTTCCACAGTCCCTTC
TGTGTTTGTGTCTGTACTTAAACAGAAGTTGGCTTGGCTTGAGATTTTAAAGAGCTCTCAGACTGATA
CAGTTTTCAGAGATTTTGCAGTTTCTGAATATCCTTAAAAACAAGTAACTCCATCAAGCTGGTGAATCTGC
TCTCCATATTTATCAGCACGTGGCTGACTGCAGCTGGATTCATCCACTTGGTGGAGAATTCAGGGGACCC
ATGGGAAAATTTCCAAAACAACCAGGCCTTACGTACTGGGAATGTGTCTACTTACTCATGGTCACAATG
TCTACAGTGGTTATGGGGACGTTTATGCAAAAACCACACTTGGACGCCCTTTCATGGTCTTCTTTCATCC
TCGGGGGACTGGCCATGTTTGGCAGCTACGTCCTGAAATCATAGAGTTAATAGGAAACCGCAAGAAATA
CGGGGGCTCCTATAGCGCGTGTAGTGAAGAAAGCACATTGTAGTCTGTGGACACATTACTCTGGAGAGT
GTCTCTAACTTCTGAAGGACTTCTGCACAAGGACCGGGATGATGTCAACGTGGAGATTGTCTTTCTTC
ACAACATCTCCCCTAACCTTGAGCTTGAGGCTCTGTTCAAACGGCATTCTCACTCAGTGGAGTTTATCA
GGGCTCTGTCCCTCAATCCACATGATCTTGCAGAGTCAAGATAGAGTCAAGATGATGCCTGATCCTT
GCCAATAAGTATTGCGCTGACCCGGATGCAGAAGATGCCTCCAACATCATGAGAGTGATCTCCATCAAAA



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ACTACCACCCAAAGATCAGGATCATCACTCAGATGCTGCAGTATCACAACAAGGCCCATCTGCTCAACAT
 CCCCAGCTGGAAGTGGAAAGAGGGTGTACGCAATATGCCTTGACAGCTCAAGTTGGGTTTCATAGCC
 CAGAGCTGTCTGGCTCAAGGCCTCTCCACAATGCTTGCCAATCTTTCTCTATGAGGTCATTCATAAAGA
 TTGAGGAAGACACATGGCAGAAATACTACTTGGAAAGGAGTCTCCAATGAAATGTACACAGAATATCTCTC
 CAGTGCCTTCGTGGGTCTGTCTTCCCTACTGTTTGTGAGCTGTGTTTGTGAAGCTTAAGCTCCTGATG
 ATAGCCATTGAGTACAAGTCTGCCAACAGAGAGAGCCGAATTAATTAACCCTGGGAACCACCTTAAGA
 TCCAAGAAGTACTTTAGGATTTTTTCATCGCAAGTGTGCCAAAGAAGTTAAAAGGGCATTTTTTTACTG
 CAAGGCCTGTCATGATGACGTACAGATCCCAAAAAGAATTAATAAATGTGGCTGCAGGCGGCTTGAAGAT
 GAGCAGCCGCCAACCTGTACCAAAAAAAAAAACGTAATGGGGCATGAGGAACTCGCCCAACACCT
 CCCCAGCTGATGAGGCATGACCCCTTGTAAATTCCTGGCAATGATCAGATTGACAACATGGACTCCAA
 TGTGAAAAAGTACGACTCCACTGGAATGTTTCACTGGTGTGCACCAAGGAGATTGAGAAAGTACTTTG
 ACTCGAAGTGAAGCTGCCATGACTGTCTGAGTGGCCATGTCGTAGTCTGCATCTTTGGGGATGCAGCT
 CAGCCCTGATTGGCTCCGGAACCTGGTATGCCACTTCGTGCTAGCAACTTTCACTATCATGAGCTCAA
 ACACATTGTGTTTGTGGCTCCATTGAGTACCTCAAGAGGGAGTGGGAAACTGCACAACCTCCCGAAA
 GTGTCCATATTGCTGTACACATTAAGTCGGCTGATTTAAGGGCTGTCAACATCAACCTCTGTGACA
 TGTGCGTTATCCTGTCAGCCAATCAGAATAATATTGATGATACTTCGCTTCAGGACAAGGAATGCATCTT
 GGCGTCACTCAACATCAATCTATGCAGTTTATGACAGCATCGGGGTCTTGAGGCTAATTCACAAAGGA
 TTCACACCTCCTGGAATGGACAGATCATCACCCGACAACAGCCAGTGCACGGGATGTTACGCCAGCCGT
 CCATCACAACTGGGGTCAACATTCATCATACGGAACCTCGTGAATGATACCAATGTTCAAGTTTTTGA
 CCAAGACGATGACGATGACCCCTGACACAGAGCTGTACCTCACACAGCCCTTTGCTTGTGGGACAGCATT
 GCCGTGAGCGTCTGGACTCACTCATGAGCGGACATACTTCAATGACAATATCCTCACCTAATACGGA
 CCCTGGTGACAGGAGGAGCCACACCAGAGCTCGAGGCTCTAATAGTGAGGAGAATGCACCTCGAGGAGG
 CTACAGCACTCCGACAGCATTGGCCAACAGGGACCGTTGCCAGTGGCCAGTTAGCCCTGTTAGATGGT
 CCTTTGCAGACTTAGGGGATGGTGGTTGTTATGGTGTCTGTTCTGCAAAGCTCTGAAAACATATAATA
 TGCTTTGTTTTGGAATTTACCGCTGAGAGATGCCACCTCAGCACCCCAAGCCAGTGTACAAAAAGGTA
 CGTCATACCAATCCTCCCTACGAGTTTGTGCTGTACCAACAGACCTGATCTTCTGCCTGATGCAGTTT
 GACCACAACGCTGGCCAATCCCGGGCCAGTCTGTCTCATTCTCCCACTCCTCACAGTCGTCAGTAAGA
 AGAGCTCCTCCGTCCACTCCATCCCGTCCACAGCAAATCGGCCGAACCGGCCAAGTCCAGGGAGTCCCG
 CGACAAACAGAAGTACGTTCCAGGAAGAGCGGCTTGA

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-RsrII
- ACCN:** NM_001253376
- Insert Size:** 3537 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_001253376.1](#), [NP_001240305.1](#)

RefSeq Size: 6020 bp

RefSeq ORF: 3537 bp

Locus ID: 16531

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 (20) differs in the 3' UTR and has multiple coding region differences, compared to variant 1. The resulting isoform (20) is shorter and has a distinct C-terminus, compared to isoform 1. Sequence Note: The RefSeq transcript and protein were derived from genomic sequence to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on alignments.