

## Product datasheet for **MC229449**

### **Kcnma1 (NM\_001253375) Mouse Untagged Clone**

#### Product data:

Product Type: Expression Plasmids  
Product Name: Kcnma1 (NM\_001253375) 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: >MC229449 representing NM\_001253375  
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCAGGAGATCTGCC  
GCCGCGATCGC

ATGGCAAACGGTGGCGGCGGGCGGGCAGCAGCGGGCGGGCGGGCGGGCGGGGAGGCAGCGGTC  
TTAGAATGAGCAGCAATATCCACGCGAACCATCTCAGCCTAGACGCGTCTCTCCTCTCTCCTCTCT  
CTCTTTCTTTCTCCTCCTCTCTCCTCTCTCGTCCACGAGCCAAAGATGGATGCGCTCATC  
ATACCGGTGACCATGGAGGTGCCGTGCGACAGCCGGGGAACGCATGTGGTGGGCTTTCTTGGCCTCT  
CCATGGTGACTTTCTTGGGGGCTCTTTCATCATCTTGGCTCTGCGGAGCTCAAGTACCTGTGGACCGT  
TTGCTGCCACTGCGGGGGAAGACGAAGGAGGCCAGAAATAAACAATGGCTCCAGCCAGGCAGATGGT  
ACTCTCAAGCCAGTGGACGAAAAAGAGGAGGTGGTGGCAGCCGAGGTCGGCTGGATGACATCTGTGAAGG  
ACTGGGCGGGGTGATGATATCCGCCAGACACTGACTGGCAGAGTCCTGGTTGTGTAGTCTTTGCTCT  
CAGCATGGTGCCCTCGTAATATACTTCATAGACTCGTCAAACCAATAGAATCCTGCCAGAATTCTAC  
AAAGATTTACATTACAGATCGACATGGCTTTCAACGTGTCTTCCTCTACTTTGGCTTGGGTTTA  
TTGCAGCCAACGATAAGCTGTGGTCTGGCTGGAAGTGAATTCAGTAGATAGATTCTTCCACAGCCCTC  
TGTGTTTGTCTGTGTAATAACAGAAGTTGGCTTGCTTGGATTGAGATTTTAAGAGCTCTCAGACTGATA  
CAGTTTTGAGATTTTGCAATATCCTTAAAAACAAGTAACTCCATCAAGCTGGTGAATCTG  
TCTCCATATTTATCAGCAGTGGCTGACTGCAGCTGGATTCATCCACTGGTGGAGAATTCAGGGGACCC  
ATGGGAAAAATTCAAAAACAACAGGCCTTACGACTGGAAATGTGTCTACTTACTCATGGTCAACATG  
TCTACAGTGGGTTATGGGACGTTTATGAAAAACCACTTGGACGCCCTTTCATGGTCTTCTTACATC  
TCGGGGACTGGCAATGTTTGCCGCTACGTGCCCCAAATGCTGCTCATCCTGAATCGGAATAAAT  
CGGCGGACTTTTAACAACATGGAGGCAGAAAGCACATTGTAGTCTGTGGACACATTACTCTGGAGGT  
GTCTCTAACTTCTGAAGGACTTTCTGACAAGGACCGGATGATGTCAACGTGGAGATTGCTTTCTTCT  
ACAACATCTCCCCTAACCTTGAGCTTGAGGCTCTGTTCAAACGGCATTTCACTCAGTGGAGTTTATCA  
GGGCTCTGCTCAATCCACATGATCTTGCCAGAGTCAAGATAGAGTCAGCAGATGCATGCCGTGATCCT  
GCCAATAAGTATTGCGCTGACCCGGATGCAGAAGATGCCTCCAACATCATGAGAGTGATCTCCATCAAAA



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ACTACCACCCAAAGATCAGGATCATCACTCAGATGCTGCAGTATCACAACAAGGCCCATCTGCTCAACAT  
 CCCCAGCTGGAAGTGGAAAGAGGGTGTACGCAATATGCCTTGACAGCTCAAGTTGGGTTTCATAGCC  
 CAGAGCTGTCTGGCTCAAGGCCTCTCCACAATGCTTGCCAATCTTTCTATGAGGTCATTCATAAAGA  
 TTGAGGAAGACACATGGCAGAAATACTACTTGGAAAGGAGTCTCCAATGAAATGTACACAGAATATCTCTC  
 CAGTGCCTTCGTGGGTCTGTCTTCCCTACTGTTTGTGAGCTGTGTTTGTGAAGCTTAAGCTCCTGATG  
 ATAGCCATTGAGTACAAGTCTGCCAACAGAGAGAGCCGAATTAATTAACCCTGGGAACCACCTTAAGA  
 TCCAAGAAGTACTTTAGGATTTTTTCATCGCAAGTGTGCCAAAGAAGTTAAAAGGGCATTTTTTTACTG  
 CAAGGCCTGTCATGATGACGTACAGATCCCAAAAAGAAATAAAAAATGTGGCTGCAGGCGGCTTGAAGAT  
 GAGCAGCCGCCAACCTGTACCAAAAAAAAAAACGTAATGGGGCATGAGGAACTCGCCCAACACCT  
 CCCCAGGCTGATGAGGCATGACCCCTTGTTAATTCCTGGCAATGATCAGATTGACAACATGGACTCCAA  
 TGTGAAAAAGTACGACTCCACTGGAATGTTTCACTGGTGTGCACCAAGGAGATTGAGAAAGTACTTTG  
 ACTCGAAGTGAAGCTGCCATGACTGTCTGAGTGGCCATGTCGTAGTCTGCATCTTTGGGGATGCAGCT  
 CAGCCCTGATTGGCTCCGGAACCTGGTATGCCACTTCGTGCTAGCAACTTTCACTATCATGAGCTCAA  
 ACACATTGTGTTTGTGGCTCCATTGAGTACCTCAAGAGGGAGTGGGAAACTGCACAACCTCCCGAAA  
 GTGTCCATATTGCTGTACACATTAAGTCGGCTGATTTAAGGGCTGTCAACATCAACCTCTGTGACA  
 TGTGCGTTATCCTGTACGCAATCAGAATAATATTGATGATACTTCGCTTCAGGACAAGGAATGCATCTT  
 GCGTCACTCAACATCAATCTATGCAGTTTGTGACAGCATCGGGTCTTGACGGCTAATTCACAGGA  
 TTCACACCTCCTGGAATGGACAGATCATCACCCGACAACAGCCAGTGCACGGGATGTTACGCCAGCCGT  
 CCATCACAACTGGGGTCAACATTCATCATACGGAACCTCGTGAATGATACCAATGTTCAAGTTTTTGA  
 CCAAGACGATGACGATGACCCCTGACACAGAGCTGTACCTCACACAGCCCTTTGCTTGTGGGACAGCATT  
 GCCGTGAGCGTCTGGACTCACTCATGAGCGGACATACTTCAATGACAATATCCTCACCTAATACGGA  
 CCCTGGTGACAGGAGGAGCCACACCAGAGCTCGAGGCTCTAATAGTGAGGAGAATGCACCTCGAGGAGG  
 CTACAGCACTCCGACAGCATTGGCCAACAGGGACCGTTGCCAGTGGCCAGTTAGCCCTGTTAGATGGT  
 CCTTTGCAGACTTAGGGATGGTGGTTGTTATGGTATCTGTTCTGCAAAGCTCTGAAAACATATAATA  
 TGCTTTGTTTTGGAATTTACCGCTGAGAGATGCCACCTCAGCACCCCAAGCCAGTGTACAAAAAGGTA  
 CGTCATACCAATCCTCCCTACGAGTTTGTGCTGTACCAACAGACCTGATCTTCTGCCTGATGCAGTTT  
 GACCACAACGCTGGCCAATCCCGGGCCAGTCTGTCTATTCTCCCACTCCTCACAGTCGTCAGTAAGA  
 AGAGCTCCTCCGTCCACTCCATCCCGTCCACAGCAAATCGGCCGAACCGGCCAAGTCCAGGGAGTCCCG  
 CGACAAACAGAAGTACGTTCCAGGAAGAGCGGCTTGA

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
 TGGATTACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-RsrII
- ACCN:** NM\_001253375
- 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\\_001253375.1](#), [NP\\_001240304.1](#)

**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 (19) differs in the 3' UTR and has multiple coding region differences, compared to variant 1. The resulting isoform (19) 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.