

## Product datasheet for **MC229498**

### Kcnma1 (NM\_001253365) Mouse Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Kcnma1 (NM\_001253365) 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:** >MC229498 representing NM\_001253365  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GGATCGC**C

ATGGCAAACGGTGGCGGGCGGGCGGGCGGCAGCAGCGGGCGGGCGGGCGGGCGGGCGGGAGGCAGCGGTC  
TTAGAATGAGCAGCAATATCCACGCGAACCATCTCAGCCTAGACGGCTCCTCCTCCTCTTCTCCTCCT  
CTTTCTTCTTCTTCTCCTCCTCTTCTCCTCCTCGTCCAGAGCCCAAGATGGATGCGCTCATC  
ATACCGGTGACCATGGAGGTGCCGTGCGACAGCCGGGGCAACGCATGTGGTGGGCTTTCTTGGCCCTCT  
CCATGGTGACTTTCTTGGGGGCCTCTTCATCATCTTGCTCTGGCGGACGCTCAAGTACCTGTGGACCGT  
TTGCTGCCACTGCGGGGGCAAGACGAAGGAGGCCAGATAAACAATGGCTCCAGCCAGGCAGATGGT  
ACTCTCAAGCCAGTGGACGAAAAAGAGGAGGTGGTGGCAGCCGAGGTGGCTGGATGACATCTGTGAAGG  
ACTGGGCAGGGGTGATGATATCCGCCCAGACACTGACTGGCAGAGTCTGGTTGTGTAGTCTTTGCTCT  
CAGCATTGGTGCCTCGTAATACTTCATAGACTCGTCAAACCAATAGAATCCTGCCAGAATTTCTAC  
AAAGATTTACATTACAGATCGACATGGCTTTCAACGTGTTCTCCTCCTACTTTGGCTTGGGTTTA  
TTGCAGCCAACGATAAGCTGTGGTTCTGGCTGGAAGTGAATTCAGTAGATTCTTCCACAGTCCCTCC  
TGTGTTTGTGTCTGTACTTAAACAGAAGTTGGCTTGGCTTGGATTTTTAAGAGCTCTCAGACTGATA  
CAGTTTTCAGAGATTTTGCAGTTTCTGAATATCCTTAAACAAGTAACTCCATCAAGCTGGTGAATCTGC  
TCTCCATATTTATCAGCACGTGGCTGACTGCAGCTGGATTTCATCCACTTGGTGGAGAATTCAGGGGACCC  
ATGGGAAAATTTCCAAAACAACCAGGCCTTACTGACTGGGAATGTGTCTACTTACTCATGGTCACAATG  
TCTACAGTGGGTATGGGGACGTTTATGCAAAAACCACACTTGGACGCCCTTTCATGGTCTTCTTCATCC  
TCGGGGGACTGGCCATGTTTGCAGCTACGTCCCTGAAATCATAGAGTTAATAGGAAACCGCAAGAAATA  
CGGGGGCTCCTATAGCGCGTTAGTGAAGAAAGCACATTGTAGTCTGTGGACACATTACTCTGGAGAGT  
GTCTCTAACTTCTGAAGGACTTCTGCACAAGGACCGGGATGATGTCAACGTGGAGATTGCTTTCTTC  
ACAACATCTCCCCTAACCTTGAGCTTGAGGCTCTGTTCAAACGGCATTCTCACTCAGTGGAGTTTATCA  
GGGCTCTGTCCCTCAATCCACATGATCTTCCAGAGTCAAGATAGAGTCAAGATGCATGCCGTGATCCTT  
GCCAATAAGTATTGCGCTGACCCGGATGCAGAAGATGCCTCCAACATCATGAGAGTGATCTCCATCAAAA



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ACTACCACCCAAAGATCAGGATCATCACTCAGATGCTGCAGTATCACAACAAGGCCCATCTGCTCAACAT  
 CCCCAGCTGGAAGTGGAAAGAGGGTGATGACGCAATATGCCTTGACAGCTCAAGTTGGGTTTCATAGCC  
 CAGAGCTGTCTGGCTCAAGGCCTCTCCACAATGCTTGCCAATCTCTTCTATGAGGTCATTCAAAGA  
 TTGAGGAAGACACATGGCAGAAATACTACTTGGAAAGAGTCTCCAATGAAATGTACACAGAATATCTCTC  
 CAGTGCCTTCGTGGGTCTGTCTCCCTACTGTTTGTGAGCTGTGTTTGTGAAGCTTAAGCTCCTGATG  
 ATAGCCATTGAGTACAAGTCTGCCAACAGAGAGCCGAATATTAATTAACCTGGGAACCACCTTAAGA  
 TCCAAGAAGGTACTTTAGGATTTTTTCATCGCAAGTGATGCCAAAGAAGTTAAAAGGCATTTTTTTACTG  
 CAAGGCCTGCATGATGACGTACAGATCCCAAAAAGAATTAATAAATGTGGCTGCAGGCGCTGATCTAT  
 TTTGAAGATGAGCAGCCGCCAACCTGTCAACAAAAAACAACGTAATGGGGCATGAGGAACCTCGC  
 CCAACACCTCCCCGAAGCTGATGAGGCATGACCCCTTGTTAATCCTGGCAATGATCAGATTGACAAACAT  
 GGACTCCAATGTGAAAAAGTACGACTCCACTGGAATGTTTCACTGGTGTGCACCAAGGAGATTGAGAAA  
 GTCATCTTGACTCGAAGTGAAGTGCCATGACTGTCCTGAGTGGCCATGTCGTAGTCTGCATCTTTGGG  
 ATGTCAGCTCAGCCCTGATTGGCTCCGGAACCTGGTATGCCACTTCGTGCTAGCAACTTCACTATCA  
 TGAGCTCAAACACATTGTGTTTGTGGGCTCCATTGAGTACCTCAAGAGGGAGTGGGAAACACTGCACAAC  
 TTCCCGAAAGTGTCCATATTGCCTGGTACACCATTAAGTCGGGCTGATTAAGGGCTGTCAACATCAACC  
 TCTGTGACATGTGCGTTATCCTGTGAGCAATCAGAATAATATTGATGATACTTCGCTTCAAGGACAAAGGA  
 ATGCATCTTGGGCTCACTCAACATCAAATCTATGCAGTTTGTGACAGCATCGGGGTCTTGCAGGCTAAT  
 TCCCAAGGATTCACACCTCCTGGAATGGACAGATCATCACCCGACAACAGCCAGTGCACGGGATGTTAC  
 GCCAGCCGTCCATCACAACCTGGGGTCAACATCCCATCATCACGGAACCTCGTGAATGATACCAATGTTCA  
 GTTTTTGGACCAAGACGATGACGATGACCCTGACACAGAGCTGTACCTCACACAGCCCTTTGCTTGTGGG  
 ACAGCATTTGCCGTGAGCGTCTGGACTCACTCATGAGCGGCACATACTCAATGACAATATCCTCACCC  
 TAATACGGACCCTGGTGACAGGAGGAGCCACACCAGAGCTCGAGGCTCTAATAGCTGAGGAGAATGCAT  
 TCGAGGAGGCTACAGCACTCCGAGACATTGGCCAACAGGGACCGTTGCCGAGTGGCCAGTTAGCCCTG  
 TTAGATTGGTCCCTTTCAGACTTAGGGGATGGTGGTGTATGGTGATCTGTTCTGCAAAGCTCTGAAAA  
 CATATAATATGCTTTGTTTTGGAATTTACCGGCTGAGAGATGCCACCTCAGCACCCCGCCAGTGTAC  
 AAAAAGGTACGTCATACCAATCCTCCCTACGAGTTTGTGCTGTACCAACAGACCTGATCTTCTGCCTG  
 ATGAGTTTGACCACAACGCTGGCCAATCCCGGCCAGTCTGTCTCATTCTCCACTCCTCACAGTCGT  
 CCAGTAAGAAGAGCTCCTCCGTCCACTCCATCCCGTCCACAGCAAATCGGCCGAACCGGCCCAAGTCCAG  
 GGAGTCCCGCACAACAGAATGCAACAAGGATGACTAGAATGGGCCAAGCAGAAAAGAAATGGTTTACA  
 GATGAGCCGGATAATGCCTATCCAGAAACATTCAAATCAAGCCCATGAGTACCCACATGGCTAACCCAGA  
 TCAACCAATATAAATCCACAAGCAGCCTGATCCCTCCAATCAGAGAAGTTGAAGATGAATGTTGA

AGCGGACCGACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
 TGGATTACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-RsrII
- ACCN:** NM\_001253365
- Insert Size:** 3705 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\\_001253365.1](#), [NP\\_001240294.1](#)

**RefSeq Size:** 4982 bp

**RefSeq ORF:** 3705 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 (9) lacks an in-frame exon in the coding region, compared to variant 1. The resulting isoform (9) lacks an internal segment, compared to isoform 1.