

## Product datasheet for MC229503

### Kcnma1 (NM\_001253364) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Kcnma1 (NM_001253364) 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:	>MC229503 representing NM_001253364 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGGATCGC**C

ATGGCAAACGGTGGCGGGCGGGCGGGCAGCAGCGGGCGGGCGGGCGGGCGGGCGGGCAGCGGT  
TTAGAATGAGCAGCAATATCCACGCGAACCATCTCAGCCTAGACGGCTCCTCCTCCTCCTCCTCCT  
CTCTTCTTCTTCTCCTCCTCCTTCTCCTCCTCCTCGTCTCGGTCCACGAGCCCAAGATGGATGCGCTCATC  
ATACCGGTGACCATGGAGGTGCCGTGCGACAGCCGGGCAACGCATGTGGTGGGCTTCTTGGCCCTCCT  
CCATGGTGACTTTCTTGGGGGCTCCTCATCATCTTGTCTTGCCGACGCTCAAGTACCTGTGGACCGT  
TTGCTGCCACTGCGGGGCAAGACGAAGGAGGCCAGAAGATAAAACATGGCTCCAGCCAGGCAGATGGT  
ACTCTCAAGCCAGTGGACGAAAAAGAGGAGGTGGTGCCAGCCGAGGTCCGGTGGTGTAGTCTTTGCTCT  
CAGCATTGGTGGCCTCGTAATAACTTCATAGACTCGTCAAACCAATAAGAACTCCAGCAATTTCTAC  
AAAGATTTACATTACAGATCGACATGGCTTTCAACGTGTTCTCCTCCTACTTTGGCTTCGGTTTA  
TTGCAGCCAACGATAAGCTGTGGTTCTGGTGGAAAGTGAATTCAGTAGATTCTTCACAGTCCCTCCTC  
TGTGTTTGTGTGTACTTAACAGAAGTTGGCTTGGCTTGAGATTTTTAAGAGCTCTCAGACTGATA  
CAGTTTTCAGAGATTTTGCAGTTTCTGAATATCCTTAAAAACAAGTAACTCCATCAAGCTGGTGAATCTGC  
TCTCCATATTTATCAGCAGTGGCTGACTGACGTGGATTTCACACTTGGTGGAGAATTCAGGGGACCC  
ATGGGAAAATTTCCAAAACAACCAGGCACCTTACGTACTGGAAATGTGTCTACTTACTCATGGTCAACAATG  
TCTACAGTGGTTATGGGGACGTTTATGCAAAAACCACACTTGGACGCCCTTTCATGGTCTTCTTCATCC  
TCGGGGGACTGGCCATGTTTCCAGCTACGTCCCTGAAATCATAGAGTTAATAGGAAACCGCAAGAATA  
CGGGGGCTCCTATAGCGGTTAGTGGAAGAAAGCACATTGTAGTCTGTGGACACATTACTCTGGAGAGT  
GTCTCTAACTTCTGAAGGACTTCTGCACAAGGACCGGATGATGTCAACGTGGAGATTGCTTTCTTC  
ACAACATCTCCCCTAACCTTGAGCTTGAGGCTCTGTTCAAACGGCATTTCACTCAGGTGGAGTTTTATCA  
GGGCTCTGTCCCTCAATCCACATGATCTTGCCAGAGTCAAGATAGAGTCAAGGATGCATGCCTGATCCTT  
GCCAATAAGTATTGCGCTGACCCGGATGCAGAAGATGCCTCCAACATCATGAGAGTATCTCCATCAAAA



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ACTACCACCCAAAGATCAGGATCATCACTCAGATGCTGCAGTATCACAACAAGGCCCATCTGCTCAACAT
CCCCAGCTGGAAGTGGAAAGAGGGTGTGACGCAATATGCCTTGACAGCTCAAGTTGGGTTTCATAGCC
CAGAGCTGTCTGGCTCAAGGCCTCTCCACAATGCTTGCCAATCTTCTCTATGAGGTCATTCAAAGA
TTGAGGAAGACACATGGCAGAAATACTACTTGGAAAGAGTCTCCAATGAAATGTACACAGAATATCTCTC
CAGTGCCTTCGTGGGTCTGTCTTCCCTACTGTTTGTGAGCTGTGTTTGTGAAGCTTAAGCTCCTGATG
ATAGCCATTGAGTACAAGTCTGCCAACAGAGAGCCGAATTAATTAACCCGGGAACCACCTTAAGA
TCCAAGAAGGTACTTTAGGATTTTTTCATCGCAAGTGTGCCAAAGAAGTTAAAAGGGCATTTTTTTACTG
CAAGGCCTGCATGATGACGTACAGATCCCAAAAGAATTAAAAAATGTGGCTGCAGGCCGCCAAGATG
TCCATCTACAAGAGAATGAGACGAGCATGTTGTTTTGATTGCGGACGTTCTGAGCGTGACTGCTCGTGCA
TGTCAGGCCGTGTGCGTGGTAACGTGGACACCCTTGAGAGAACCCTTCCCGCTTTCTTCTGTCTGTAA
TGATTGCTCCACCAGTTTCCGTGCCTTTGAAGATGAGCAGCCGCCAACCCCTGTCACCAAAAAAAAAACAA
CGTAATGGGGGCATGAGGAACCTGCCAACACCTCCCCGAAGCTGATGAGGCATGACCCCTTGTAAATTC
CTGGCAATGATCAGATTGACAACATGGACTCCAATGTGAAAAAGTACGACTCCACTGGAATGTTTACTG
GTGTGCACCCAAGGAGATTGAGAAAGTCATCTTGACTCGAAGTGAAGCTGCCATGACTGCCTGAGTGGC
CATGTCTGATGCTGATCTTTGGGGATGTCAGCTCAGCCCTGATTGGCCTCCGGAACCTGGTGATGCCAC
TTGCGTGCTAGCAACTTTCACTATCATGAGCTCAAACACATTGTGTTTGTGGGCTCCATTGAGTACCTCAA
GAGGGAGTGGGAAACTGCACAACCTCCCGAAAGTGCCATATTGCCTGGTACACCATTAAGTCGGGCT
GATTTAAGGGCTGTCAACATCAACCTCTGTGACATGTGCGTTATCCTGTGACCCAATCAGAATAATTTG
ATGATACTTCGCTTCAGGACAAGGAATGCATCTTGGCGTCACTCAACATCAAAATCTATGACGTTTGTGA
CAGCATCGGGTCTTGCAGGCTAATCCCAAGGATTACACCTCCTGGAATGGACAGATCATCACCCGAC
AACAGCCAGTGCACGGGATGTTACGCCAGCCGTCCATCACAACCTGGGGTCAACATCCCATCATACGG
AACTCGTGAATGATACCAATGTTTCAGTTTTTGGACCAAGACGATGACGATGACCCTGACACAGAGCTGA
CCTCACACAGCCCTTTGCTTGTGGGACAGCATTGCGGTGACGCTCCTGGACTCACTCATGAGCGCGACA
TACTTCAATGACAATATCCTCACCTAATACGGACCCTGGTGACAGGAGGAGCCACACCAGAGCTCGAGG
CTCTAATAGCTGAGGAGAATGCACCTTCGAGGAGCTACAGCACTCCGCGAGACATTGGCCAACAGGGACCG
TTGCCGAGTGGCCAGTTAGCCCTGTTAGATGGTCCCTTTCAGACTTAGGGGATGGTGGTTGTTATGGT
GATCTGTTCTGCAAAGCTCTGAAAACATATAATATGCTTTGTTTTGGAATTTACCGGCTGAGAGATGCC
ACCTCAGCACCCCGAGCCAGTGTACAAAAGGTACGTCATACCAATCCTCCCTACGAGTTTGTGCTCGT
ACCAACAGACCTGATCTTCTGCCTGATGAGTTTGACCACAACGCTGGCCAATCCCGGGCCAGTCTGTCT
CATTCTCCCACTCCTCACAGTGTCCAGTAAGAAGAGCTCCTCCGTCCACTCCATCCCCTCCACAGCAA
ATCGGCCGAACCGGCCAAGTCCAGGGAGTCCCGCGACAACAGAAGTACGTTTCAGGAAGAGCGGCTTTG
A

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AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGATAAGGTTTAA

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**Restriction Sites:**

SgfI-RsrII

**ACCN:**

NM\_001253364

**Insert Size:**

3711 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\\_001253364.1](#), [NP\\_001240293.1](#)

**RefSeq Size:** 6194 bp

**RefSeq ORF:** 3711 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 (7) differs in the 3' UTR and has multiple coding region differences, compared to variant 1. The resulting isoform (7) 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.