

Product datasheet for **MC229514**

Kcnma1 (NM_001253361) Mouse Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: Kcnma1 (NM_001253361) 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: >MC229514 representing NM_001253361
Red=Cloning site **Blue**=ORF **Orange**=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**GCGATCGC**C

ATGGCAAACGGTGGCGGGCGGGCGGCCGAGCAGCGGGCGGGCGGGCGGGCGGGGAGCGAGCGGT
TTAGAATGAGCAGCAATATCCACGCGAACCATCTCAGCCTAGACGCGTCCTCTCTCTCTCTCTCT
CTCTTCTCTTCTTCT
ATACCGGTGACCATGGAGGTGCCGTGCGACAGCCGGGCAACGCATGTGGTGGGCTTTCTTGGCCTCCT
CCATGGTGACTTTCTTGGGGGCTCTTCATCATCTTGCTCTGGCGGACGCTCAAGTACCTGTGGACCGT
TTGCTGCCACTGCGGGGCAAGACGAAGGAGGCCAGAAGATAAACAATGGCTCCAGCCAGGCAGATGGT
ACTCTCAAGCCAGTGGACGAAAAGAGGAGGTGGTGGCAGCCGAGGTGGCTGGATGACATCTGTGAAGG
ACTGGGAGGGGTGATGATATCCGCCAGACACTGACTGGCAGAGTCTGGTGTGTTAGTCTTTGCTCT
CAGCATTGGTGCCCTCGTAATACTTCATAGACTCGTCAAACCAATAGAATCCTGCCAGAATTCTAC
AAAGATTTACATTACAGATCGACATGGCTTTCAACGTGTCTTCTCTCTACTTTGGCTTGGGTTTA
TTGCAGCCAACGATAAGCTGTGGTCTGGCTGGAAGTGAATTCAGTAGATTCTTCCACAGCCCTCT
TGTGTTTGTTGCTGTGTAATAACAGAGTTGGCTTGGCTTGAGATTTTAAGAGCTCTCAGACTGATA
CAGTTTTAGAGATTTTGCAGTTTCTGAATATCCTTAAAAACAAGTAACTCCATCAAGCTGGTGAATCTGC
TCTCCATATTTATCAGCAGTGGCTGACTGCAGCTGGATTCACCACTTGGTGGAGAATTCAGGGGACCC
ATGGGAAAATTCCAAAACAACCCAGGCCTTACGTACTGGGAATGTGTCTACTTACTCATGGTACAATG
TCTACAGTGGTTATGGGACGTTTATGCAAAAACCACTTGGACGCCTTTCATGGTCTTCTCTATCC
TCGGGGGACTGGCCATGTTTCCAGCTACGTCCCTGAAATCATAGAGTTAATAGGAAACCGCAAGAAATA
CGGGGGCTCCTATAGCGCGTGTAGTGAAGAAAGCACATGTAGTCTGTGGACACATTACTCTGGAGGT
GTCTCTAACTTCTGAAGGACTTCTGCACAAGGACCGGGATGATGTCAACGTGGAGATTGCTTTCTTC
ACAACATCTCCCTAACCTTGAGCTTGGGCTCTGTTCAAACGGCATTCTCACTCAGGTGGAGTTTATCA
GGGCTCTGTCTCAATCCACATGATCTTGCAGAGTCAAGATAGAGTCAAGATGATGCATGCCTGATCCTT
GCCAATAAGTATTGCGCTGACCCGGATGCAGAAGATGCCTCCAACATCATGAGAGTATCTCCATCAAAA



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ACTACCACCCAAAGATCAGGATCATCACTCAGATGCTGCAGTATCACAACAAGGCCCATCTGCTCAACAT
 CCCAGCTGGAAGTGGAAAGAGGGTGTGACGCAATATGCCTTGACAGCTCAAGTTGGGTTTCATAGCC
 CAGAGCTGTCTGGCTCAAGGCCTCTCCACAATGCTTGCCAATCTCTTCTATGAGGTCATTATAAAGA
 TTGAGGAAGACACATGGCAGAAATACTACTTGAAGGAGTCTCCAATGAAATGTACACAGAATATCTCTC
 CAGTGCCTTCGTGGTCTGTCTCCCTACTGTTGTGAGCTGTGTTTGTGAAGCTTAAGCTCCTGATG
 ATAGCCATTGAGTACAAGTCTGCCAACAGAGAGAGCCGAAGCCGAAAGCGAATATTAATTAACCCGGA
 ACCACCTTAAGATCCAAGAAGTACTTTAGGATTTTTTCATCGAAGTGTGCCAAGAAGTTAAAAGGGC
 ATTTTTTACTGCAAGGCTGTATGATGACGTACAGATCCCAAAGAATTAATAAATGTGGCTGCAGG
 CGGCTGATCTATTCCAAGATGTCCATCTACAAGAGAATGAGACGAGCATGTTGTTTTGATTGCGGACGTT
 CTGAGCGTGACTGCTCGTGCATGTCAGGCCGTGTGCGTGGTAACGTGGACACCCTTGAGAGAACCCTCC
 GCTTTCTCTGTCTGTAAATGATTGCTCCACGATTTCCGTGCCTTTGAAGATGAGCAGCCGCAACC
 CTGTCACCAAAAAAAAAACAACGTAATGGGGCATGAGGAACTCGCCAACACCTCCCGAAGCTGATGA
 GGCATGACCCCTGTAAATCCTGGCAATGATCAGATTGACAACATGGACTCCAATGTAAAAAGTACGA
 CTCACCTGGAATGTTTACTGGTGTGCACCCAAGGAGATTGAGAAAGTCATCTTGACTCGAAGTGAAGCT
 GCCATGACTGTCTGAGTGGCCATGTCGTAGTCTGCATCTTTGGGGATGTCAGCTCAGCCCTGATTGGCC
 TCCGGAACCTGGTGTGACCACTTCGTGCTAGCAACTTTCACTATCATGAGCTCAAACACATTGTGTTGT
 GGGCTCCATTGAGTACCTCAAGAGGGAGTGGGAAACACTGCACAACCTCCCGAAAGTGTCCATATTGCT
 GGTACACCATTAAAGTCGGGCTGATTTAAGGGCTGTCAACATCAACCTCTGTGACATGTGCGTTATCCTGT
 CAGCCAATCAGAAATAATTGATGATACTTCGCTTCAGGACAAGGAATGCATCTTGGCGTCACTCAACAT
 CAAATCTATGCAGTTTGTGACAGCATCGGGTCTTGCAGGCTAATCCCAAGGATTCACACCTCCTGGA
 ATGGACAGATCATACCCGACAACAGCCAGTGCACGGGATGTTACGCCAGCCGTCATCACAACCTGGG
 TCAACATCCCATCATCAGGAACCTCGTAATGATACCAATGTTCAAGTTTTGGACCAAGACGATGACGA
 TGACCCTGACACAGAGCTGTACCTCACACAGCCCTTTGCTTGTGGGACAGCATTGCCGTCAGCTCCTG
 GACTCACTCATGAGCGGACATACTTCAATGACAATATCCTCACCTAATACGGACCCTGGTGACAGGAG
 GAGCCACACCAGAGCTCGAGGCTCTAATAGCTGAGGAGAATGCACTTCGAGGAGGCTACAGCACTCCGCA
 GACATTGGCCAACAGGGACCGTTGCCGAGTGGCCAGTTAGCCCTGTTAGATGGTCCCTTTCAGACTTA
 GGGGATGGTGGTTGTTATGGTGTCTGTTCTGCAAAGCTTGAAAACATATAATATGCTTTGTTTTGAA
 TTTACCGGCTGAGAGATGCCACCTCAGCACCCAGCCAGTGTACAAAAGGTACGTATCACAACCTCC
 TCCCTACGAGTTTGTGCTGTACCAACAGACCTGATCTTCTGCCTGATGCAGTTTGACCACAACGCTGGC
 CAATCCCGGGCCAGTCTGTCTATTCTCCCACTCCTCACAGTCGTCCAGTAAGAAGAGCTCCTCCGTCC
 ACTCCATCCCGTCCACAGCAAATCGGCCGAACCGGCCAAGTCCAGGGAGTCCCGGACAACAGAACAG
 AAAAGAAATGGTTTACAGATGA

AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:

SgfI-RsrII

ACCN:

NM_001253361

Insert Size:

3732 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_001253361.1](#), [NP_001240290.1](#)

RefSeq Size: 5139 bp

RefSeq ORF: 3732 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 (4) has multiple differences in the coding region, one of which results in a frameshift, compared to variant 1. The resulting isoform (4) 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.