

## Product datasheet for **MC229471**

### Kcnma1 (NM\_001253370) Mouse Untagged Clone

#### Product data:

|                      |  |
|----------------------|--|
| Product Type:        | Expression Plasmids  |
| Product Name:        | Kcnma1 (NM_001253370) 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: | >MC229471 representing NM_001253370<br>Red=Cloning site Blue=ORF Orange=Stop codon |

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**GCGATCGC**C

ATGGCAAACGGTGGCGGGCGGGCGGGCGGCAGCAGCGGGCGGGCGGGCGGGCGGGCGGGAGGCAGCGGT  
TTAGAATGAGCAGCAATATCCACGCGAACCATCTCAGCCTAGACGCGTCTCTCTCTCTCTCTCTCTCTCT  
CTCTTCT  
ATACCGGTGACCATGGAGGTGCCGTGCGACAGCCGGGGCAACGCATGTGGTGGGCTTTCTTGGCCTCCT  
CCATGGTGACTTTCTTGGGGGCTCTTCATCATCTTGCTCTGGCGGACGCTCAAGTACCTGTGGACCGT  
TTGCTGCCACTGCGGGGCAAGACGAAGGAGGCCAGAAGATAAACAATGGCTCCAGCCAGGCAGATGGT  
ACTCTCAAGCCAGTGGACGAAAAAGAGGAGGTGGTGGCAGCCGAGGTGGCTGGATGACATCTGTGAAGG  
ACTGGCAGGGGTGATGATATCCGCCAGACACTGACTGGCAGAGTCTGGTGTGTAGTCTTTGCTCT  
CAGCATTGGTGCCTCGTAATACTTCATAGACTCGTCAAACCAATAGAATCCTGCCAGAATTTCTAC  
AAAGATTTACATTACAGATCGACATGGCTTTCAACGTGTTCTTCTCTCTCTCTCTCTCTCTCTCTCTCTCT  
TTGCAGCCAACGATAAGCTGTGGTCTGGCTGGAAGTGAATTCAGTAGATTCTTCCACAGTCCCTCTC  
TGTGTTTGTGTCTGTACTTAAACAGAAGTTGGCTTGGCTTGGATTTTTAAGAGCTCTCAGACTGATA  
CAGTTTTCAGAGATTTTGCAGTTTCTGAATATCCTTAAAAACAAGTAACTCCATCAAGCTGGTGAATCTGC  
TCTCCATATTTATCAGCAGTGGCTGACTGCAGCTGGATTCATCCACTGGTGGAGAATTCAGGGGACCC  
ATGGGAAAATTTCAAAAACAACCAGGCCTTACGTACTGGAAATGTGTCTACTTACTCATGGTCACAATG  
TCTACAGTGGTTATGGGACGTTTATGCAAAAACCACTTGGACGCCCTTTCATGGTCTTCTTCATCC  
TCGGGGGACTGGCCATGTTTCCAGCTACGTCCCTGAAATCATAGAGTTAATAGGAAACCGCAAGAAATA  
CGGGGGCTCCTATAGCGGTTAGTGAAGAAAGCACATTGTAGTCTGTGGACACATTACTCTGGAGAGT  
GTCTCTAACTTCTGAAGGACTTCTGCACAAGGACCGGGATGATGTCAACGTGGAGATTGCTTTCTCTC  
ACAACATCTCCCCTAACCTTGAAGCTTGAAGCTCTGTTCAAACGGCATTTCACTCAGTGGAGTTTTATCA  
GGGCTCTGTCCCTCAATCCACATGATCTTCCAGAGTCAAGATAGAGTCAAGATGCATGCCGTATCCTT  
GCCAATAAGTATTGCGCTGACCCGGATGCAGAAGATGCCTCCAACATCATGAGAGTGATCTCCATCAAAA



[View online »](#)

ACTACCACCCAAAGATCAGGATCATCACTCAGATGCTGCAGTATCACAACAAGGCCCATCTGCTCAACAT  
 CCCAGCTGGAAGTGGAAAGAGGGTGTGACGCAATATGCCTTGACAGCTCAAGTTGGGTTTCATAGCC  
 CAGAGCTGTCTGGCTCAAGGCCTCTCCACAATGCTTGCCAATCTCTTCTATGAGGTCATTCAAAGA  
 TTGAGGAAGACACATGGCAGAAATACTACTTGGAAAGAGTCTCCAATGAAATGTACACAGAATATCTCTC  
 CAGTGCCTTCGTGGGTCTGTCTCCCTACTGTTTGTGAGCTGTGTTTGTGAAGCTTAAGCTCCTGATG  
 ATAGCCATTGAGTACAAGTCTGCCAACAGAGAGGCCGAATTAATTAACCCGGGAACCACCTTAAGA  
 TCCAAGAAGTACTTTAGGATTTTTCATCGCAAGTGTGCCAAAGAAGTTAAAAGGGCATTTTTTACTG  
 CAAGGCCTGTCATGATGACGTACAGATCCCAAAAAGAATTAATAAATGTGGCTGCAGGCGCTCAAGGTT  
 GAAGCTAGAGCCCGCTATCACAAGACCCATTTATGCACAAGAATGCGACTCCCAATTCTCCACACGTGC  
 CCAAGCCAGTTGAAGATGAGCAGCCGCCAACCCGTGCACCAAAAAAAAAACAACGTAATGGGGGCATGAG  
 GAACTCGCCCAACACCTCCCGAAGCTGATGAGGCATGACCCCTTGTTAATTCCTGGCAATGATCAGATT  
 GACAACATGGACTCCAATGTGAAAAAGTACGACTCCACTGGAATGTTTCACTGGTGTGCACCCAAGGAGA  
 TTGAGAAAGTCATCTTGACTCGAAGTGAAGCTGCCATGACTGTCTGAGTGGCCATGTCGTAGTCTGCAT  
 CTTTGGGGATGTCAGCTCAGCCCTGATTGGCCTCCGGAACCTGGTGTGCCACTTCGTGCTAGCAACTTT  
 CACTATCATGAGCTCAAACACATTGTGTTTGTGGGCTCCATTGAGTACCTCAAGAGGGAGTGGGAAACAC  
 TGCACAACCTCCCGAAAGTGTCCATATTGCCTGGTACACCATTAAAGTCGGGCTGATTTAAGGGCTGCAA  
 CATCAACCTCTGTGACATGTGCGTTATCCTGTGACGCAATCAGAATAATATTGATGATACTTCGTTTCAG  
 GACAAGGAATGCATCTTGGCGTCACTCAACATCAAATCTATGCAGTTTGTGACAGCATCGGGTCTTGC  
 AGGCTAATTCCTAAGGATTACACCTCCTGGAATGGACAGATCATCACCCGACAACAGCCAGTGCACGG  
 GATGTTACGCCAGCCGTCATCACAACCTGGGGTCAACATTCCTCATCACGGAACCTCGTGAATGATACC  
 AATGTTTCAAGTTTTGGACCAAGACGATGACGATGACCCGACACAGAGCTGTACCTCACACAGCCCTTG  
 CTTGTGGGACAGCATTGCGGTGAGCGTCTGGACTCACTCATGAGCGGACATACTTCAATGACAATAT  
 CCTCACCTAATACGGACCCTGGTGACAGGAGGCCACACCAGAGCTCGAGGCTCTAATAGCTGAGGAG  
 AATGCACTTCGAGGAGGCTACAGCACTCCGAGACATTGGCCAACAGGGACCGTTGCCGAGTGGCCAGT  
 TAGCCCTGTTAGATGGTCCCTTTGCAGACTTAGGGGATGGTGGTGTATGTTGATCTGTTCTGCAAAGC  
 TCTGAAAAATATAATATGCTTTGTTTTGGAATTTACCGGCTGAGAGATGCCACCTCAGCACCCCCAGC  
 CAGTGTACAAAAAGGTACGTATCACCATCCTCCCTACGAGTTTGTGAGCTCGTACCAACAGACCTGATCT  
 TCTGCCTGATGCAGTTTACCACAACGCTGGCCAATCCCGGGCCAGTCTGTCTCATTCTCCACTCCTC  
 ACAGTCGTCCAGTAAGAAGAGCTCCTCCGTCCACTCCATCCCGTCCACAGCAAATCGGCCGAACCGGCC  
 AAGTCCAGGGAGTCCCGGACAAACAGAAGTACGTTTCCAGGAAGAGCGGCTTGA

AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC  
 TGGATTACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-RsrII
- ACCN:** NM\_001253370
- Insert Size:** 3624 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\\_001253370.1](#), [NP\\_001240299.1](#)

**RefSeq Size:** 6107 bp

**RefSeq ORF:** 3624 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 (14) differs in the 3' UTR and has multiple coding region differences, compared to variant 1. The resulting isoform (14) 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.