

Product datasheet for MR231683

Kcnma1 (NM_001253371) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Kcnma1 (NM_001253371) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Kcnma1
Synonyms:	5730414M22Rik; BKCa; MaxiK; mSlo; mSlo1; Slo; Slo1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
ORF Nucleotide Sequence:	>MR231683 representing NM_001253371 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGGATCGCC

ATGGCAAACGGTGGCGGCGGGCGGGCAGCAGCGGGCGGGCGGGCGGGCGGGCGGGCGGGAGGCAGCGGT
TTAGAATGAGCAGCAATATCCACGCGAACCATCTCAGCCTAGACGGTCTCTCCTCTCTCTCTCTCCT
CTCTTCTTCTTCTCTCTCCTCTCTCCT
ATACCGGTGACCATGGAGGTGCCGTGCGACAGCCGGGGCAACGCATGTGGTGGGCTTTCTTGGCCTCCT
CCATGGTGACTTTCTTCGGGGCCTCTTCATCATCTTGCTCTGGCGGACGCTCAAGTACCTGTGGACCGT
TTGCTGCCACTGCGGGGCAAGACGAAGGAGGCCAAGAATAAACAATGGCTCCAGCCAGGCAGATGGT
ACTCTCAAGCCAGTGGACGAAAAAGAGGAGGTGGTGGCAGCCGAGGTCGGTGGATGACATCTGTGAAGG
ACTGGGCGGGGTGATGATATCCGCCAGACACTGACTGGCAGAGTCTGGTGTGTGTAGTCTTTGCTCT
CAGCATTGGTGCCTCGTAATACTTCATAGACTCGTCAAACCAATAGAATCCTGCCAGAATTTCTAC
AAAGATTTACATTACAGATCGACATGGCTTTCACAGTGTCTCTCCTCTACTTTGGCTTCGGGTTA
TTGCAGCCAACGATAAGCTGTGGTCTGGCTGGAAGTGAATTCAGTAGATTCTTCCAGTCCCTCCTC
TGTGTGTTGTGTGTACTTAAACAGAAGTGGCTGGCTTGGATTGAGATTTTAAGAGCTCTCAGACTGATA
CAGTTTTAGAGATTTGCAATTTCTGAATATCCTTAAAAACAAGTAACTCCATCAAGCTGGTGAATCTGC
TCTCCATATTTATCAGCAGTGGCTGACTGCAGCTGGATTTCATCCACTTGGTGGAGAATTCAGGGGACCC
ATGGGAAAAATTTCAAAAACAACCGACTTACGACTGGGAATGTGTCTACTTACTCATGGTACAATG
TCTACAGTGGTTATGGGACGTTTATGCAAAAACCAACTTGGACGCCTTTCATGGTCTTCTTCATCC
TCGGGGGACTGGCCATGTTTCCAGCTACGTCCTGAAATCATAGAGTTAATAGGAAACCGCAAGAAATA
CGGGGCTCCTATAGCGGTTAGTGAAGAAAGCACATTGTAGTCTGTGGACACATTACTCTGGAGAT
GTCTCTAACTTCTGAAGGACTTTCTGCACAAGGACCGGATGATGTCAACGTGGAGATTGTCTTCTTC
ACAACATCTCCCTAACCTTGAAGGCTCTGTTCAAACGCGATTTCACTCAGTGGAGTTTATCA
GGGCTCTGCTCCTCAATCCACATGATCTTGCCAGAGTCAAGATAGAGTCAGCAGATGCATGCCGTATCCT
GCCAATAAGTATTGCGCTGACCCGGATGCGAAGATGCCTCCAACATCATGAGAGTGATCTCCATCAAAA



View online »

ACTACCACCCAAAGATCAGGATCATCACTCAGATGCTGCAGTATCACAACAAGGCCCATCTGCTCAACAT
CCCCAGCTGGAAGTGGAAAGAGGGTGATGACGCAATATGCCTTGACAGCTCAAGTTGGGTTTCATAGCC
CAGAGCTGTCTGGCTCAAGGCCTCTCCACAATGCTTGCCAATCTCTTCTATGAGGTCATTCATAAAGA
TTGAGGAAGACACATGGCAGAAATACTACTTGGAAAGGAGTCTCCAATGAAATGTACACAGAATATCTCTC
CAGTGCCTTCGTGGGTCTGTCTTCCCTACTGTTTGTGAGCTGTGTTTGTGAAGCTTAAGCTCCTGATG
ATAGCCATTGAGTACAAGTCTGCCAACAGAGAGGCCGAATATTAATTAACCCTGGGAACCACCTTAAGA
TCCAAGAAGGTACTTTAGGATTTTTTCATCGCAAGTGATGCCAAAGAAGTTAAAAGGGCATTTTTTTACTG
CAAGGCCTGCATGATGACGTACAGATCCCAAAAAGAATTAATAAATGTGGCTGCAGGCGGTGATCTAT
TTTGAAGATGAGCAGCCGCCAACCTGTCAACAAAAAACAACGTAATGGGGCATGAGGAACCTCGC
CCAACACCTCCCCGAAGCTGATGAGGCATGACCCCTTGTTAATCCTGGCAATGATCAGATTGACAAACAT
GGACTCCAATGTGAAAAAGTACGACTCCACTGGAATGTTTCACTGGTGTGCACCAAGGAGATTGAGAAA
GTCATCTTGACTCGAAGTGAAGTGCCATGACTGTCCTGAGTGGCCATGTCGTAGTCTGCATCTTTGGG
ATGTCAGCTCAGCCCTGATTGGCTCCGGAACCTGGTGTGCCACTTCGTGCTAGCAACTTCACTATCA
TGAGCTCAAACACATTGTGTTTGTGGGCTCCATTGAGTACCTCAAGAGGGAGTGGGAAACACTGCACAAC
TTCCCGAAAGTGTCCATATTGCCTGGTACACCATTAAGTCGGGCTGATTAAGGGCTGTCAACATCAACC
TCTGTGACATGTGCGTTATCCTGTGAGCAATCAGAATAATATTGATGATACTTCGCTTCAAGGACAAAGGA
ATGCATCTTGGCGTCACTCAACATCAAATCTATGCAGTTTGTGACAGCATCGGGGTCTTGCAGGCTAAT
TCCAAGGATTCACACCTCCTGGAATGGACAGATCATCACCCGACAACAGCCAGTGCACGGGATGTTAC
GCCAGCGTCCATCACAACCTGGGGTCAACATCCCATCATCACGGAACCTCGTAAAGCCGGCAAGTTGCC
TTTGGTATCAGTCAATCAGGAAAAAACAAGTGGGACGCACATTCTAATGATAACGGAGTTGGTGAATGAT
ACCAATGTTCAGTTTTTGGACCAAGACGATGACGATGACCCTGACACAGAGCTGTACCTCACACAGCCCT
TTGCTTGTGGGACAGCATTGCGCTCAGCGTCTGGACTCACTCATGAGCGGACATACTTCAATGACAA
TATCCTCACCTAATACGGACCCTGGTACAGGAGGAGCCACACCAGAGCTCGAGGCTCTAATAGCTGAG
GAGAATGCACTTCGAGGAGGCTACAGCACTCCGACAGATTGGCCAACAGGGACCGTTGCCGAGTGGCCC
AGTTAGCCCTGTAGATGGTCCCTTTCAGACTTAGGGGATGGTGGTGTATGGTGATCTGTTCTGCAA
AGCTCTGAAAACATATAATATGCTTTGTTTTGGAATTTACCGGCTGAGAGATGCCACCTCAGCACCCCC
AGCCAGTGACAAAAAGGTACGTCATCACAATCCTCCCTACGAGTTTGTGAGCTCGTACCAACAGACCTGA
TCTTCTGCCTGATGCAGTTTGACCACAACGCTGGCCAATCCCGGGCCAGTCTGTCTATTCTCCCACTC
CTCACAGTCGTCCAGTAAGAAGAGCTCCTCCGTCCACTCCATCCCGTCCACAGCAATCGGCCGAACCGG
CCCAAGTCCAGGGAGTCCCGCACAACAGAAAAAAGAATGGTTTACAGA

AGCGGACCGACGCGTACGCGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
TGGATTACAAGGATGACGACGATAAGGTTTAA

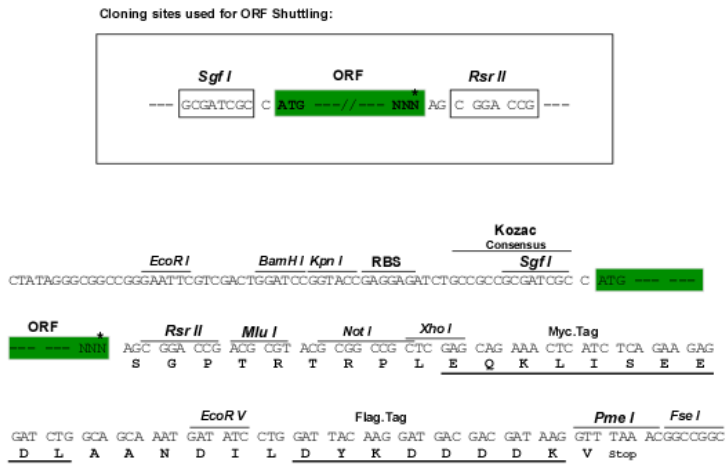
Protein Sequence: >MR231683 representing NM_001253371
 Red=Cloning site Green=Tags(s)

MANGGGGGGGSSGGGGGGGGSGLRMSSNIHANHLSLDASSSSSSSSSSSSSSSSSSSSSVHEPKMDALI
 IPVTMEVPCDSRQRMWVAFLASSMVTFFGGFLIILLWRTLKYLWTVCCCHCGGKTKEAQKINNGSSQADG
 TLKPVDEKEEVAAEVGWMTSVKDWAGVMISAQTLTGRVLVLFALSIGALVIYFIDSSNPIESCQNFY
 KDFTLQIDMAFNVFLLYFGLRFIAANDKLWFLEVNVSVDVFTVPPVFVSVYLNRSWGLRFLRALRLI
 QFSEILQFLNILKTSNSIKLVNLLSIFISTWLTAAAGFIHLVENSQDPWENFQNNQALTYWECVYLLMVTM
 STVGYGDVYAKTTLGRLFMVFFILGGLAMFASYVPEIIEIIGNRKKYGGSYSAVSGRKHIVVCGHITLES
 VSNFLKDFLHKDRDDVNVIEIVFLHNISPNELEALFKRHFTQVEFYQGSVLNPHDLARVKIESADACLIL
 ANKYCADPDAEDASNIMRVISIKNYHPKIRIITQMLQYHNKAHLLNIPSWNKEGDDAICLAELKLGFA
 QSCLAQGLSTMLANLFSMRSFIKIEEDTWQKYYLEGVSNEMYTEYLSSAFVGLSFPTVCELFCVKLKLML
 IAIEYKANSRESRILINPGNHLKIQEGTLGFFIASDAKEVKRAFFYCKACHDDVTDPKRIKCKGCRRLIY
 FEDEQPPTLSPKKKQRNGGMRNSPNTSPKLMRHDPLLIPGNDQIDNMDSNVKKYDSTGMFHWCAPKEIEK
 VILTRSEAAMTVLSGHVVVVICIFGDVSSALIGLRNLVAMPLRASNPHYHELKHIVFVGSIEYLKREWETLHN
 FPKVSILPGTPLSRADLRAVNINLDCMCVILSANQNNIDDTSLQDKECILASLNKSMQFDDSIGVLQAN
 SQGFTPPGMDRSSPDNSPVHGMLRQPSITTVGNIPITELAKPGKPLVSVNQEKNSGTHILMITELVND
 TNVQFLDQDDDDPDTELYLTQPFACGTAFVSVLDSLMSATYFNDNILTIRTLVTGGATPELEALIAE
 ENALRGGYSTPQTLANRDRCRVAQLALLDGPFDLGDGGCYGDLFCALKTYNMLCFGIYRLRDAHLSTP
 SQCTKRYVITNPPYEFELVPTDLIFCLMQFDHNAGQSRASLSHSSSSQSSSKSSSVHSIPSTANRPNR
 PKSRESRDQKKEMVYR

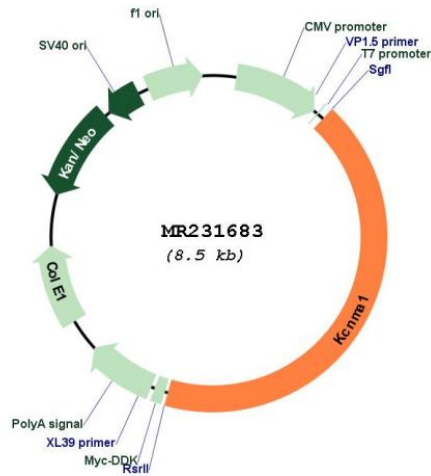
SGP TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-RsrII

Cloning Scheme:



* The last codon before the Stop codon of the ORF

Plasmid Map:


ACCN: NM_001253371

ORF Size: 3621 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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_001253371.1](#), [NP_001240300.1](#)

RefSeq Size: 5031 bp

RefSeq ORF: 3624 bp

Locus ID: 16531

Cytogenetics: 14 A3

MW: 134.6 kDa

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]