

Product datasheet for **RC211000**

KCNA1 (NM_000217) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KCNA1 (NM_000217) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	KCNA1
Synonyms:	AEMK; EA1; HBK1; HUK1; KV1.1; MBK1; MK1; RBK1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC211000 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGACGGTGATGTCTGGGGAGAAGCTGGACGAGGCTTCGGCCGCCCGGGCCACCCAGGATGGCAGCT
 ACCCCCGCAGGCCGACACGACGACCAGAGTGTGCGAGCGCTGGTATCAACATCTCCGGCTGCG
 CTTGAGACGCAGCTCAAGACCTGGCGCAGTTCGCCAACACGCTGCTGGCAACCTAAGAAACGCATG
 CGCTACTTCGACCCCTGAGGAACGAGTACTTCTTCGACCGCAACCGGCCAGCTTCGACGCCATCCTCT
 ACTACTACCAGTCCGGCGGCCCTGCGGAGGCCGTAACGTGCCCTGGACATGTTCTCCGAGGAGAT
 CAAGTTTTACGAGTTGGGCGAGGAGCCATGGAGAAGTTCGGGAGGACGAGGGCTTCATCAAGGAGGAG
 GAGCGCCCTGCCCCGAGAAGGAGTACCAGCGCCAGGTGGTGTCTTCGAGTACCCGAGAGCTCGG
 GGCCCGCCAGGGTCATGCCATCGTCTCCGTATGGTCATCCTCATCTCCATCGTCATCTTTGCGCTGGA
 GACGCTCCCCGAGCTGAAGGATGACAAGGACTTACGGGCACCGTCCACCGCATCGACAACACCACGGTC
 ATCTACAATCCAACATCTTACAGACCCCTTCTTCATCGTGAAACGCTGTGCATCATCTGTTCTCCT
 TCGAGCTGGTGGTGCCTTCTTCGCTGCCACGCAAGACGGACTTCTTCAAAAACATCATGAATTCAT
 AGACATTTGTGGCCATCATTCTTATTTTCATCACCTGGGCACCGAGATAGCTGAGCAGGAAGGAAACAG
 AAGGGCGAGCAGGCCACCTCCCTGGCCATCCTCAGGGTATCCGCTTGGTAAGGGTTTTAGAATCTTCA
 AGCTCTCCCGCCACTCTAAGGGCTCCAGATCCTGGGCCAGACCTCAAAGCTAGTATGAGAGAGCTAGG
 GCTGCTCATCTTTTCTTTCATCGGGTATCCTGTTTTCTAGTGCAGTGTACTTTGCCGAGGCGGAA
 GAAGCTGAGTGCAGTCTCCAGTATCCCCGATGCTTTCTGGTGGGCGGTGGTGTCCATGACCACTGTAG
 GATACGGTGACATGTACCCTGTGACAATTGGAGGCAAGATCGTGGGCTCCTTGTGTGCCATCGCTGGTGT
 GCTAACAATTGCCCTGCCGTACCTGTCAATTGTGTCCAATTTCAACTATTTCTACCACCGAGAAACTGAG
 GGGGAAGAGCAGGCTCAGTTGCTCCACGTGAGTCCCCTAACTTACGCTCTGACAGTGCCTCAGTCGCC
 GCAGTTCTCTACTATGAGCAAGTCTGAGTACATGGAGATCGAAGAGGATATGAATAATAGCATAGCCCA
 TTATAGACAGGTCAATATCAGAAGTCCCAATTGCACCACAGCTAACCAAAACTGCGTTAATAAGAGCAAG
 CTACTGACCGATGTT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC211000 protein sequence
 Red=Cloning site Green=Tags(s)

MTVMSENVDEASAAPGHPQDGSYPRQADHDDHECCERVVINISGLRFETQLKTLAQFPNTLLGNPKKRM
 RYFDPLRNEYFFDRNRPSFDAILYYYQSGGRLRPVNVPLDMFSEEIKFYELGEEAMEKFREDEGF IKEE
 ERPLPEKEYQRQVWLLFEYPESSGPARIIVSVMVILISIVIFCLELPELKDDKDFGTGVHRIDNTTV
 IYNSNIFTDPFFIVETLCIIWFSFELVVRFFACPSKTDFFKNIMNFIDIVAIIPYFITLGTIEIAEQEGNQ
 KGEQATSLAILRVIRLVRFIFKLSRHSKGLQILGQTLKASMRELGLLIFFLFIGVILFSSAVYFAEAE
 EAESHFSSIPDAFWAVVSMTTVGYGDMYPVTIGGKIVGSLCAIAGVLTIALPVPVIVSNFNFYHRETE
 GEEQAQLLHVSSPNLASDSLRRSSSTMSEYMEIEEDMNSIAHYRQVNIIRNCTTANQNCVNSK
 LLTDV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6130_d06.zip

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_000217

ORF Size: 1485 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_000217.3](#)

RefSeq Size: 7983 bp

RefSeq ORF: 1488 bp

Locus ID: 3736

UniProt ID: [Q09470](#)

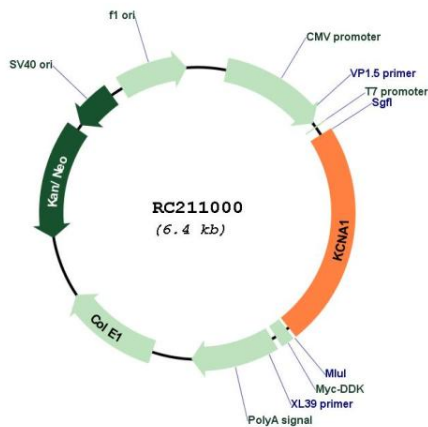
Cytogenetics: 12p13.32

Protein Families: Druggable Genome, Ion Channels: Potassium, Transmembrane

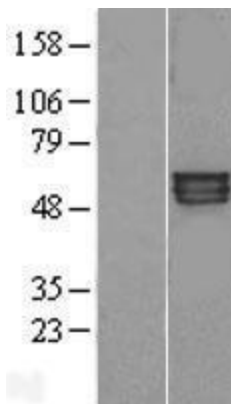
MW: 56.5 kDa

Gene Summary: This gene encodes a voltage-gated delayed potassium channel that is phylogenetically related to the Drosophila Shaker channel. The encoded protein has six putative transmembrane segments (S1-S6), and the loop between S5 and S6 forms the pore and contains the conserved selectivity filter motif (GYGD). The functional channel is a homotetramer. The N-terminus of the channel is associated with beta subunits that can modify the inactivation properties of the channel as well as affect expression levels. The C-terminus of the channel is complexed to a PDZ domain protein that is responsible for channel targeting. Mutations in this gene have been associated with myokymia with periodic ataxia (AEMK). [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC211000



Western blot validation of overexpression lysate (Cat# [LY400085]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211000 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).