

Product datasheet for **RG211000**

KCNA1 (NM_000217) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KCNA1 (NM_000217) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	KCNA1
Synonyms:	AEMK; EA1; HBK1; HUK1; KV1.1; MBK1; MK1; RBK1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG211000 representing NM_000217
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGACGGTGTCTGGGGAGAAGCTGGACGAGGCTTCGGCCGCCCGGGCCACCCAGGATGGCAGCT
 ACCCCCGCAGGCCGACCACGACGACCAGAGTCTGCGAGCGCGTGGTATCAACATCTCCGGCTGCG
 CTTGAGACGCAGCTCAAGACCTGGCGCAGTTCGCCAACACGCTGCTGGCAACCCTAAGAAACGCATG
 CGCTACTTCGACCCCTGAGGAACGAGTACTTCTTCGACCGAACCGGCCAGCTTCGACGCCATCTCT
 ACTACTACCAGTCCGGCGGCCCTGCGGAGGCCGTAACGTGCCCTGGACATGTTCTCCGAGGAGAT
 CAAGTTTTACGAGTTGGCGAGGAGCCATGGAGAAGTTCGGGAGGACGAGGGCTTCATCAAGGAGGAG
 GAGCGCCCTGCCCCGAGAAGGAGTACCAGCGCCAGGTGGTCTCTTCGAGTACCCGAGAGCTCGG
 GGCCCGCCAGGGTCATGCCATCGTCTCCGTATGGTCATCCTCATCTCCATCGTATCTTTGCCTGGA
 GACGCTCCCCGAGCTGAAGGATGACAAGGACTTCACGGGCACCGTCCACCGCATCGACAACACCAGGTC
 ATCTACAATCCAACATCTTACAGACCCCTTCTTCATCGTGAAACGCTGTGCATCATCTGGTTCTCT
 TCGAGCTGGTGGTGCCTTCTTCGCTGCCCCAGCAAGACGGACTTCTTCAAAAACATCATGAATTCAT
 AGACATTTGGCCATCATTCTTATTTTCATCACCTGGGCACCGAGATAGCTGAGCAGGAAGGAAACCAG
 AAGGGCGAGCAGGCCACCTCCCTGGCCATCCTCAGGGTATCCGCTTGGTAAGGGTTTTTGAATCTTCA
 AGCTCTCCCGCCACTCTAAGGGCTCCAGATCCTGGGCCAGACCTCAAAGCTAGTATGAGAGAGCTAGG
 GCTGCTCATTTTTCTCTTTCATCGGGTATCCTGTTTTCTAGTGCAGTGTACTTTGCCGAGGCGGAA
 GAAGCTGAGTGCACCTTCCAGTATCCCCGATGCTTTCTGGTGGGCGGTGGTGTCCATGACCACTGTAG
 GATACGGTGACATGTACCCTGTGACAATTGGAGGCAAGATCGTGGGCTCCTTGTGTGCCATCGTGGTGT
 GCTAACAATTGCCCTGCCCGTACCTGTCAATTGTGTCCAATTTCAACTATTTCTACCACCGAGAACTGAG
 GGGGAAGAGCAGGCTCAGTTGCTCCACGTGAGTCCCCTAACTTACGCTCTGACAGTGCCTCAGTCGCC
 GCAGTTCTCTACTATGAGCAAGTCTGAGTACATGGAGATCGAAGAGGATATGAATAATAGCATAGCCCA
 TTATAGACAGGTCAATATCAGAAGTCCCAATTGCACCACAGCTAACCAAAACTGCGTTAATAAGAGCAAG
 CTACTGACCGATGTT

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

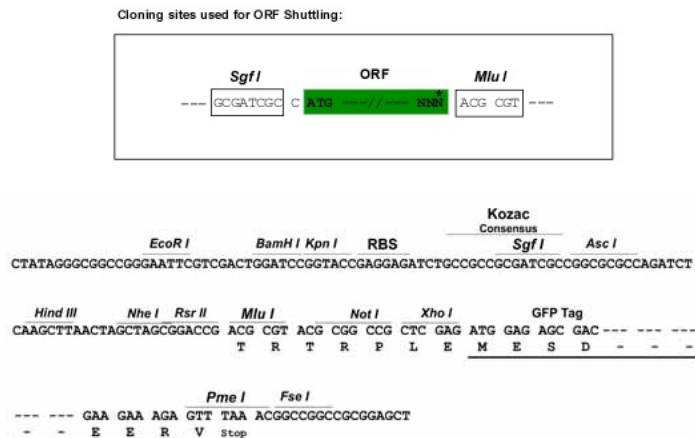
>RG211000 representing NM_000217
 Red=Cloning site Green=Tags(s)

MTVMSENVDEASAAPGHPQDGSYPRQADHDDHECCERVVINISGLRFETQLKTLAQFPNTLLGNPKKRM
 RYFDPLRNEYFFDRNRPSFDAILYYYQSGGRLRRPVNVPLDMFSEEIKFYELGEEAMEKFREDEGFIKEE
 ERPLPEKEYQRQVWLLFEYPSSGPARVIAIVSVMVILISIVIFCLELPELKDDKDFGTGVRIDNTTV
 IYNSNIFTDPPFIVETLCIIWFSFELVVRFFACPSKTDFFKNIMNFIDIVAIIPYFITLGTIEAEQEGNQ
 KGEQATSLAILRVIRLVRFVFRIFKLSRHSKGLQILGQTLKASMRELGLLIFFLFVIGVILFSSAVYFAEAE
 EAESHFSSIPDAFWAVVSMTTVGYGDMYPVTIGGKIVGSLCAIAGVLTIALPVPVIVSNFNFYHRETE
 GEEQAQLLHVSSPNLASDSLRRSSSTMSKSEYMEIEEDMNSIAHYRQVNIIRTANCTANQNCVNKSK
 LLTDV

TRTRPLE – GFP Tag – V

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.

RefSeq: [NM_000217.2](#), [NP_000208.2](#)

RefSeq Size: 7983 bp

RefSeq ORF: 1488 bp

Locus ID: 3736

UniProt ID: [Q09470](#)

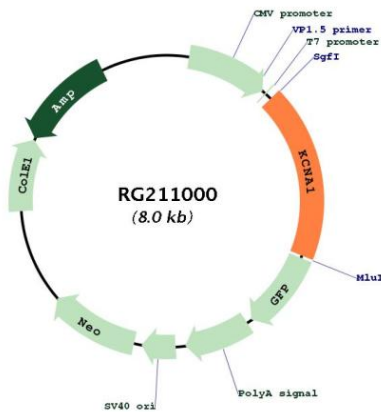
Cytogenetics: 12p13.32

Protein Families:

Druggable Genome, Ion Channels: Potassium, Transmembrane

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 RG211000