

Product datasheet for RC218643

KCNQ2 (NM_172109) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|---|
| Product Type: | Expression Plasmids |
| Product Name: | KCNQ2 (NM_172109) Human Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | KCNQ2 |
| Synonyms: | BFNC; DEE7; EBN; EBN1; ENB1; HNSPC; KCNA11; KV7.2 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |
| ORF Nucleotide Sequence: | >RC218643 representing NM_172109 Red=Cloning site Blue=ORF Green=Tags(s) |

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGTGCAGAAGTCGCGCAACGGCGGCGTATACCCGGCCCGAGCGGGGAGAAGAAGCTGAAGTGGGCT
TCGTGGGGCTGGACCCCGCGCGCCGACTCCACCGGGACGGGGCGCTGCTGATCGCCGGCTCCGAGGC
CCCCAAGCGCGGCAGCATCCTCAGCAAACCTCGCGGGGCGCGGGGCGCCGGGAAGCCCCCAAGCGC
AACGCCTTCTACCGCAAGCTGCAGAATTCCTCTACAACGTGCTGGAGCGGCCGCGGGCTGGGCGTTCA
TCTACCACGCCTACGTGTTCTCCTGGTTTTCTCCTGCCTCGTGTGTCTGTGTTTTCCACCATCAAGGA
GTATGAGAAGAGCTCGGAGGGGGCCCTCTACATCCTGAAATCGTGACTATCGTGGTGTGGCGTGGAG
TACTTCGTGCGGATCTGGGCCGACAGGCTGCTGCTGCCGGTACCGTGGCTGGAGGGGGCGGCTCAAGTTG
CCCGGAAACCGTTCTGTGTGATTGACATCATGGTGTCTATCGCCTCCATTGCGGTGCTGGCCGCCGGCTC
CCAGGGCAACGTCTTTGCCACATCTGCGCTCCGGAGCCTGCGCTTCTGCAGATTCTGCGGATGATCCGC
ATGGACCGGGGGGAGGCACCTGGAAGCTGCTGGGCTCTGTGGTCTATGCCACAGCAAGGAGCTGGTCA
CTGCCTGGTACATCGGCTTCCTTTGTCTCATCTGGCCTGTTCTCTGGTACTTGGCAGAGAAGGGGA
GAACGACCACTTTGACACCTACGCGGATGCACTCTGGTGGGCGCTGATCACGCTGACCACCATTTGGCTAC
GGGGACAAGTACCCCGAGACCTGGAACGGCAGGCTCCTTGGCGCAACCTCACCCATCGGTGTCTCCT
TCTTCGCGCTGCCTGACGCATCTTGGGTCTGGGTTTGCCTGAAGGTTTCAGGAGCAGCACAGGCAGAA
GCACTTTGAGAAGAGGCGGAACCCGGCAGCAGGCTGATCCAGTCGCGCTGGAGATTCTACGCCACCAAC
CTCTCGGCACAGACCTGCACTCCACGTGGCAGTACTACGAGCGAACGGTACCCTGCCATGTACAGGT
ACCGCCGCCGGCACCTGCCACCAAGCAACTGTTTCATTTTTATTTTCCATTTGTTCT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC218643 representing NM_172109
Red=Cloning site Green=Tags(s)

MVQKSRNGGVYPGPSGEKKLVGVFVGLDPGAPDSTRDGALLIAGSEAPKRGSILSKPRAGGAGAGKPPKR
 NAFYRKLNFLYNVLERPRGWAFIYHAYVFLVFSCLVLSVFSTIKEYEKSSEGALYILEIVTIVVFGVE
 YFVRIWAAGCCCRYRGWRGRKLFARKPFCVIDIMVLIASIAVLAAGSQGNVFATSALRSLRFLQILRMIR
 MDRRGGTWKLLGSVYVAHSKELVTAWYIGFLCLILASFLVYLAEKGENDHFDTYADALWWGLITLTTIGY
 GDKYPQTWNGRLLAATFTLIGVSFFALPAGILGSGFALKVQEQHRQKHFEKRRNPAAGLIQSAWRFYATN
 LSRTDLHSTWQYYERTVTVPMYRYYYRARRAPATKQLFHFLFSICS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6748_d09.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_172109

ORF Size: 1179 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_172109.3](#)

RefSeq Size: 1425 bp

RefSeq ORF: 1182 bp

Locus ID: 3785

UniProt ID: [O43526](#)

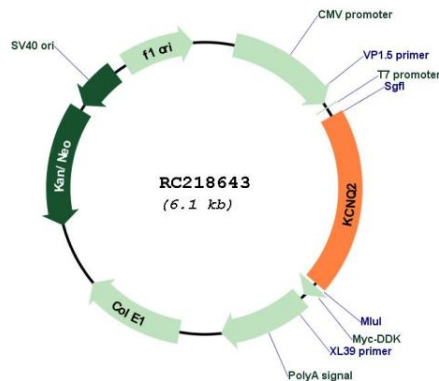
Cytogenetics: 20q13.33

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

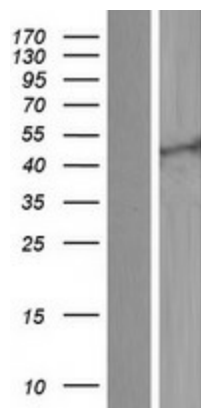
MW: 44.1 kDa

Gene Summary: The M channel is a slowly activating and deactivating potassium channel that plays a critical role in the regulation of neuronal excitability. The M channel is formed by the association of the protein encoded by this gene and a related protein encoded by the KCNQ3 gene, both integral membrane proteins. M channel currents are inhibited by M1 muscarinic acetylcholine receptors and activated by retigabine, a novel anti-convulsant drug. Defects in this gene are a cause of benign familial neonatal convulsions type 1 (BFNC), also known as epilepsy, benign neonatal type 1 (EBN1). At least five transcript variants encoding five different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC218643



Western blot validation of overexpression lysate (Cat# [LY406842]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC218643 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).