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Product datasheet for RC213421

KCNQ4 (NM_172163) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KCNQ4 (NM_172163) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	KCNQ4
Synonyms:	DFNA2; DFNA2A; KV7.4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

View online »

ORF Nucleotide Sequence:

>RC213421 representing NM_172163
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCCGAGGCCCCCCCGCGCCGCCTCGGCCTGGGTCCCCCGCCCGGGGACGCCCCCCGCGCGGAGCTAG
TGGCGCTCACGGCCGTGCAGAGCGAACAGGGCGAGGCGGGCGGGGGCGGCTCCCCGCGCCGCCTCGGCCT
CCTGGGCAGCCCCCTGCCGCCGGGCGCGCCCCTCCCTGGGCCGGGCTCCGGCTCGGGCTCCGCCTGCGGC
CAGCGCTCCTCGGCCGCGCACAAGCGCTACCGCCGCCTGCAGAACTGGGTCTACAACGTGCTGGAGCGGC
CCCGCGGCTGGGCCTTCGTCTACCACGTCTTCATATTTTTGCTGGTCTTCAGCTGCCTGGTGCTGTCTGT
GCTGTCCACTATCCAGGAGCACCAGGAACTTGCCAACGAGTGTCTCCTCATCTTGGAATTCGTGATGATC
GTGGTTTTCGGCTTGGAGTACATCGTCCGGGTCTGGTCCGCCGGATGCTGCTGCCGCTACCGAGGATGGC
AGGGTCGCTTCCGCTTTGCCAGAAAGCCCTTCTGTGTCATCGACTTCATCGTGTTCGTGGCCTCGGTGGC
CGTCATCGCCGCGGGTACCCAGGGCAACATCTTCGCCACGTCCGCGCTGCGCAGCATGCGCTTCCTGCAG
ATCCTGCGCATGGTGCGCATGGACCGCCGCGGCGGCACCTGGAAGCTGCTGGGCTCAGTGGTCTACGCGC
ATAGCAAGGAGCTGATCACCGCCTGGTACATCGGGTTCCTGGTGCTCATCTTCGCCTCCTTCCTGGTCTA
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CCTTACTGGGCATCTCTTTCTTTGCCCTGCCTGCCGGCATCCTAGGCTCCGGCTTTGCCCTGAAGGTCCA
GGAGCAGCACCGGCAGAAGCACTTCGAGAAGCGGAGGATGCCGGCAGCCAACCTCATCCAGGCTGCCTGG
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CACGGTGGACGACATCATGCCTGCTGTGAAGACAGTCATCCGCTCCATCAGGATTCTCAAGTTCCTGGTG
GCCAAAAGGAAATTCAAGGAGACACTGCGACCGTACGACGTGAAGGACGTCATTGAGCAGTACTCAGCAG
GCCACCTGGACATGCTGGGCCGGATCAAGAGCCTGCAAACTCGGGTGGACCAAATTGTGGGTCGGGGGCC
CGGGGACAGGAAGGCCCGGGAGAAGGGCGACAAGGGGCCCTCCGACGCGGAGGTGGTGGATGAAATCAGC
ATGATGGGACGCGTGGTCAAGGTGGAGAAGCAGGTGCAGTCCATCGAGCACAAGCTGGACCTGCTGTTGG
GCTTCTATTCGCGCTGCCTGCGCTCTGGCACCTCGGCCAGCCTGGGCGCCGTGCAAGTGCCGCTGTTCGA
CCCCGACATCACCTCCGACTACCACAGCCCTGTGGACCACGAGGACATCTCCGTCTCCGCACAGACGCTC
AGCATCTCCCGCTCGGTCAGCACCAACATGGAC

ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGA
TTACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC213421 representing NM_172163
Red=Cloning site Green=Tags(s)

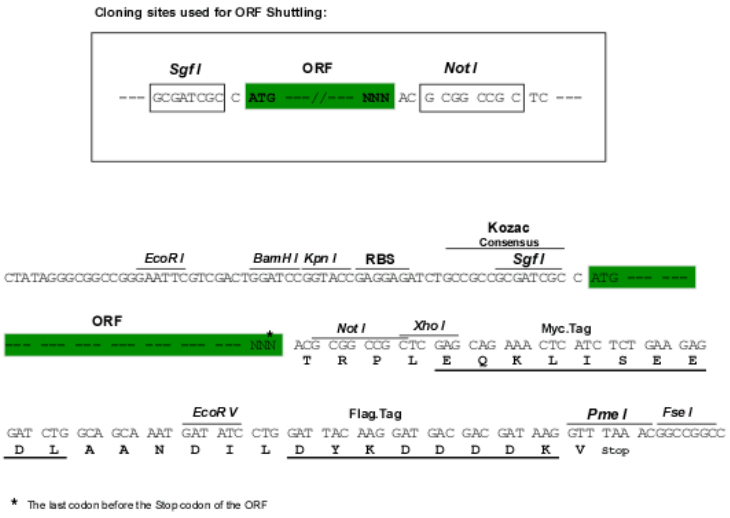
MAEAPPRRLGLGPPPGDAPRAELVALTAVQSEQGEAGGGGSPRRLGLLGSPLPPGAPLPGPGSGSGSACG
QRSSAAHKRYRRLQNWVYNVLERPRGWAFVYHVFIFLLVFSCLVLSVLSTIQEHQELANECLLILEFVMI
VVFGLEYIVRVWSAGCCCRYRGWQGRFRFARKPFCVIDFIVFVASVAVIAAGTQGNIFATSALRSMRFLQ
ILRMVRMDRRGGTWKLLGSVVYAHSKELITAWYIGFLVLIFASFLVYLAEKDANSDFSSYADSLWWGTIT
LTTIGYGDKTPHTWLGRVLAAGFALLGISFFALPAGILGSGFALKVQEQHRQKHFEKRRMPAANLIQAAW
RLYSTDMSRAYLTATWYYYDSILPSFSSRMGIKDRIRMGSSQRRTGPSKQHLAPPTMPTSPSSEQVGEAT
SPTKVQKSWSFNDRTRFRASLRLKPRTSAEDAPSEEVAEEKSYQCELTVDDIMPAVKTVIRSIRILKFLV
AKRKFKETLRPYDVKDVIEQYSAGHLDMLGRIKSLQTRVDQIVGRGPGDRKAREKGDKGPSDAEVVDEIS
MMGRVVKVEKQVQSIEHKLDLLLGFYSRCLRSGTSASLGAVQVPLFDPDITSDYHSPVDHEDISVSAQTL
SISRSVSTNMD

TRRLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mg4341_d08.zip

Restriction Sites: SgfI-NotI

Cloning Scheme:



ACCN: NM_172163

ORF Size: 1923 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_172163.3

RefSeq Size: 2173 bp

RefSeq ORF: 1926 bp

Locus ID: 9132

UniProt ID: P56696

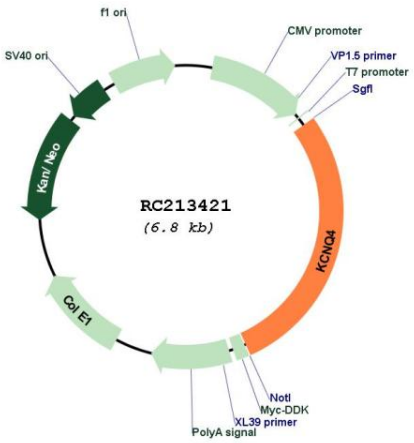
Cytogenetics: 1p34.2

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

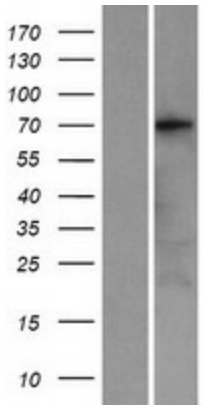
MW: 71 kDa

Gene Summary: The protein encoded by this gene forms a potassium channel that is thought to play a critical role in the regulation of neuronal excitability, particularly in sensory cells of the cochlea. The current generated by this channel is inhibited by M1 muscarinic acetylcholine receptors and activated by retigabine, a novel anti-convulsant drug. The encoded protein can form a homomultimeric potassium channel or possibly a heteromultimeric channel in association with the protein encoded by the KCNQ3 gene. Defects in this gene are a cause of nonsyndromic sensorineural deafness type 2 (DFNA2), an autosomal dominant form of progressive hearing loss. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

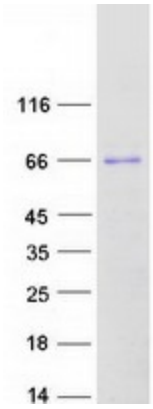
Product images:



Circular map for RC213421



Western blot validation of overexpression lysate (Cat# [LY406774]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC213421 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified KCNQ4 protein (Cat# [TP313421]). The protein was produced from HEK293T cells transfected with KCNQ4 cDNA clone (Cat# RC213421) using MegaTran 2.0 (Cat# [TT210002]).