

Product datasheet for **RG213421**

KCNQ4 (NM_172163) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KCNQ4 (NM_172163) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	KCNQ4
Synonyms:	DFNA2; DFNA2A; KV7.4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG213421 representing NM_172163
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGC**C

ATGGCCGAGGCCCCCGCGCCCTCGGCCTGGGTCCCCCGCCGGGACGCCCCCGCGCGGAGCTAG
 TGGCGCTCACGGCGTGCAGAGCGAACAGGGCGAGGCGGGCGGGCGGCTCCCCCGCGCCCTCGGCCT
 CCTGGGACGCCCCCTGCCGCCGGGCGCGCCCTCCCTGGGCCGGGCTCCGGCTCGGGCTCCGCCTCGCGC
 CAGCGCTCCTCGGCCGCGACAAGCGCTACCGCCGCTGCAGAACTGGGTCTACAACGTGCTGGAGCGGC
 CCCCGGGTGGGCTTCGTCTACCACGTCTTCATATTTTGTGGTCTTCAGCTGCCTGGTGTCTGTGT
 GCTGTCCACTATCCAGGAGCACCAGGAATTGCCAACGAGTGTCTCCTCATCTTGAATTCGTGATGATC
 GTGTTTTTCGGCTTGAGTACATCGTCCGGTCTGGTCCGCCGGATGCTGCTGCCGCTACCGAGGATGGC
 AGGGTCGCTTCGCTTTGCCAGAAAGCCCTTCTGTGTCATCGACTTCATCGTGTTCGTGGCTCGGTGGC
 CGTCATCGCCGCGGTACCCAGGCAACATCTCGCCACGTCCGCGCTGCGCAGCATGCGCTTCCTGCAG
 ATCCTGCGCATGTGCGCATGGACCGCCGCGCGGCACCTGGAAGCTGCTGGGCTCAGTGGTCTACGCGC
 ATAGCAAGGAGCTGATCACCGCCTGGTACATCGGGTTCCTGGTGTCTATCTTCGCCTCCTTCCTGGTCTA
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 GGAGCAGCACCGGAGAGCACTTCGAGAAGCGGAGGATGCCGGCAGCAACCTCATCCAGGCTGCCTGG
 CGCCTGTACTCCACCGATATGAGCCGGGCTACCTGACAGCCACCTGGTACTACTATGACAGTATCCTCC
 CATCCTTCAGCAGCCGGATGGGCATCAAAGACCGCATCCGCATGGGCAGTCCCAGCGCGGACGGGTCC
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 CACGGTGGACGACATCATGCCTGCTGTGAAGACAGTATCCGCTCCATCAGGATTCTCAAGTTCCTGGTG
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 GCCACCTGGACATGCTGGGCCGGATCAAGAGCCTGCAAACTCGGGTGACCAAAATTGGGTGGGGGCC
 CGGGGACAGGAAGGCCCGGAGAGGGGACAAGGGGCCCTCCGACGCGGAGGTGGTGGATGAAATCAGC
 ATGATGGGACGCGTGGTCAAGGTGGAGAAGCAGGTGCAGTCCATCGAGCACAAGCTGGACCTGCTGTTGG
 GCTTCTATTGCGCTGCCTGCGCTCTGGCACCTCGGCCAGCCTGGGCGCCGTGCAAGTGCCGCTGTTTGA
 CCCCAGATCACCTCCGACTACCACAGCCTGTGGACCACGAGGACATCTCCGTCTCCGCACAGACGCTC
 AGCATCTCCCGCTCGGTGAGCAACATGGAC

AC**GGGCCG**CTCGAG – GFP Tag – GTTTAA

Protein Sequence:

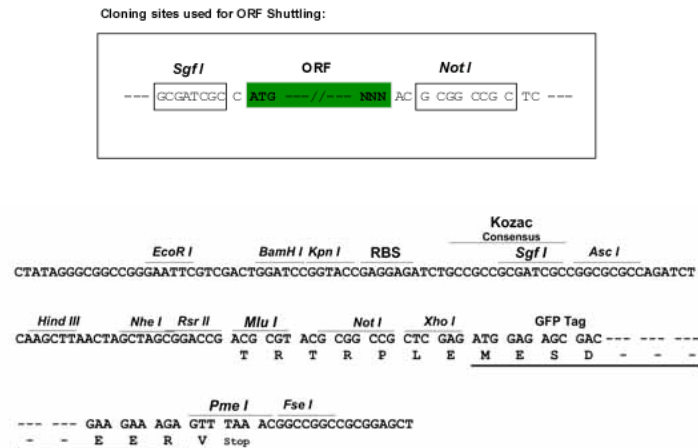
>RG213421 representing NM_172163
 Red=Cloning site Green=Tags(s)

MAEAPRRRLGLPPPGDAPRAELVALTAVQSEQGEAGGGSPRRLLGLGSPLPPGAPLPGPSGSGSACG
 QRSSAAHKRYRRLQNWVYNVLERPRGWAFVYHVFIFLLVFSLVLSVLSTIQEHQELANECLLILEFVMI
 VVFGLEYIVRVWSAGCCCRYRGWQGRFRFARKPFCVIDFIVFVASVAVIAAGTQGNIFATSALRSMRFLQ
 ILRMVRMDRRGGTWKLLGSVYVYHASKELITAWYIGFLVLIASFVLYLAEKDANSDFSSYADSLWWGTIT
 LTTIGYGDKTPHTWLGRVLAAGFALLGISFFALPAGILGSGFALKVQEQHRQKHFEKRRMPAANLIQA
 AWRLYSTDMSRAYLTATWYYDSILPSFSSRMGIKDRIRMGSSQRRTPGSKQHLAPPTMPTSPSSEQVGEAT
 SPTKVQKSWSFNDRTRFRASRLKPRTSADAPSEEVAEEKSYQCELTVDDIMPAVKTVIRSIKFLV
 AKRKFKETLRPYDVKDIEQYSAGHLDMLGRIKSLQTRVDQIVGRGPGDRKAREKGDKGPSDAEVVDEIS
 MMGRVVKVEKQVQSIEHKLDLLGFYSRCLRSCTSASLGAVQVPLFDPDITS DYHSPVDHEDISVSAQTL
 SISRVSSTNMD

TRPLE – GFP Tag – V

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

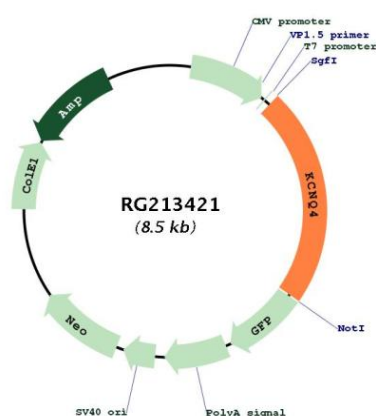
RefSeq ORF: 1926 bp

Locus ID: 9132

UniProt ID: [P56696](#)

Cytogenetics:	1p34.2
Protein Families:	Druggable Genome, Ion Channels: Potassium, Transmembrane
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 RG213421