

Product datasheet for **RG213670**

KCNN2 (NM_021614) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	KCNN2 (NM_021614) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	KCNN2
Synonyms:	hSK2; KCa2.2; SK2; SKCA2; SKCa 2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG213670 representing NM_021614
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAGCAGCTGCAGGTACAACGGGGCGTCATGCGGCCGCTCAGCAACTGAGCGCTCCCGCCGAACC
 TGCACGAGATGGACTCAGAGGCGCAGCCCTGCAGCCCCCGCTGTGCGGAGGAGGTGCGGCGCGTC
 CCCCCGTCTGCAGCCGCTGCCGCCGCCCGCTGTTTCGTCTCAGCCCCGAGATCGTGGTGTCTAAG
 CCCGAGACAACAACCTCCAACAACCTGGCGCTCTATGGAACCGCGCGGAGGCAGCACTGGAGGAGCG
 GCGGGGTGGCGGAGCGGGCACGGCAGCAGTGGACCAAGTCCAGCAAAAAGAAAAACCAGAACAT
 CGGCTACAAGCTGGGCCACCGCGCGCCCTGTTGAAAAGCGCAAGCGGCTCAGCGACTACGCGCTCATC
 TTCGGCATGTTCCGCATCGTGGTATGGTATCGAGACCGAGTGTCTGGGGCGCTACGACAAGGCGT
 CGCTGTATTCCTAGCTCTGAAATGCCTTATCAGTCTCTCCACGATCATCCTGCTCGGTCTGATCATCGT
 GTACCACGCCAGGAAATACAGTTGTTTATGGTGGACAATGGAGCAGATGACTGGAGAATAGCCATGACT
 TATGAGCGTATTTCTTCATCTGCTTGGAAATACTGGTGTGTGCTATTATCCCATACCTGGGAATTATA
 CATTACATGGACGGCCCGCTTGCCTTCTCTATGCCCATCCACAACCACCGTGTATGTGGATATTAT
 TTTATCTATACCAATGTTCTTAAGACTCTATCTGATTGCCAGAGTCATGCTTTTACATAGCAAATTTTC
 ACTGATGCCTCCTCTAGAAGCATTGGAGCACTTAATAAGATAAATTTCAATACACGTTTTTGTATGAAGA
 CTTTAATGACTATATGCCAGGAAGTACTCTTGGTTTTAGTATCTCATTATGGATAATTGCCGCATG
 GACTGTCCGAGCTTGTGAAAGGTACCATGATCAACAGGATGTTACTAGCAACTTCCTTGGAGCGATGTGG
 TTGATTAACAATACTTTCTCTCCATTGGTTATGGTGACATGGTACCTAACACATACTGTGAAAAGGAG
 TCTGCTACTTACTGGAATTATGGTGTGCTGGTGCACAGCCCTGGTGGTAGCTGTAGTGGCAAGGAAGT
 AGAACTTACAAAAGCAGAAAAACAGTGCACAATTTTCATGATGGATACTCAGCTGACTAAAAGAGTAAAA
 AATGCAGCTGCCAATGTACTCAGGGAACATGGCTAATTTACAAAATACAAAGCTAGTAAAAAGATAG
 ATCATGAAAAAGTAAAGAAAATCAACGAAAATTCCTGCAAGCTATTCATCAATTAAGAAGTGTAAAAAT
 GGAGCAGAGGAACTGAATGACCAAGCAAACTTTGGTGGACTTGGCAAAGACCCAGAACATCATGTAT
 GATATGATTTCTGACTTAAACGAAAGGAGTGAAGACTTCGAGAAGAGGATTGTTACCCTGAAAACAAAAC
 TAGAGACTTTGATTGGTAGCATCCAGCCCTCCCTGGGCTCATAAGCCAGACCATCAGGCAGCAGCAGAG
 AGATTTCAATTGAGGCTCAGATGGAGAGCTACGACAAGCACGTCACTTACAATGCTGAGCGGTCCCGGTCC
 TCGTCCAGGAGGGCGGCTCTTCCACAGCACCACCAACTTCATCAGAGAGTAGC

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG213670 representing NM_021614
 Red=Cloning site Green=Tags(s)

MSSCRYNGGVMRPLSNLSASRRNLHEMDSEAQPLQPPASVGGGGGASSPSAAAAAAAAAVSSSAPEIVVSK
 PEHNNSNNLALYGTGGGGSTGGGGGGSGHGSSSGTKSSKKNQNIQYKLGHRRALFEKRKRLSDYALI
 FGMFGIVVMVETELSWGAYDKASLYSLALKCLISLSTIILLGLIIVYHAREIQLFMVDNGADDWRIAMT
 YERIFFICLEILVCAIHPIPGNYFTWTARLAFSYAPSTTTADVDIILSIPMFLRLYL IARVMLLHSKLF
 TDASSRSIGALNKINFNTRFVMKTLMTICPGTVLLVFSISLWIIAAWTVRACERYHDQQDVTSNFLGAMW
 LISITFLSIGYDMVPNTYCGKGVCLLTGIMGAGCTALVVAVVARKLELTKAEKHVHNFMMDTQLTKRVK
 NAAANVLRWLIYKNTKLVKKIDHAKVRKHQRKFLQAIHQLRVSKMEQRKLNQANTLVDLAKTQNIIMY
 DMISDLNERSEDFEKRIVTLETKLETLIGSIHALPGLISQTIRQQQDFIEAQMESYDKHVITYNAERSRS
 SSRRRRSSTAPPTSSSS

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_021614

ORF Size: 1737 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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_021614.3](#), [NP_067627.2](#)

RefSeq Size: 2515 bp

RefSeq ORF: 2376 bp

Locus ID: 3781

UniProt ID: [Q9H2S1](#)

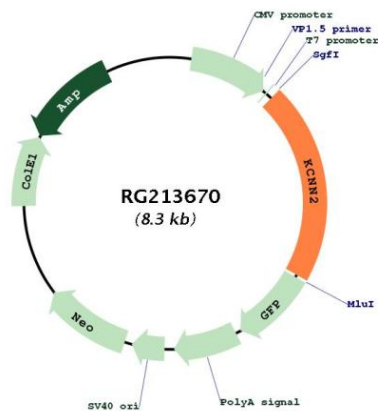
Cytogenetics: 5q22.3

Domains: SK_channel, CaMBD

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

Gene Summary: Action potentials in vertebrate neurons are followed by an afterhyperpolarization (AHP) that may persist for several seconds and may have profound consequences for the firing pattern of the neuron. Each component of the AHP is kinetically distinct and is mediated by different calcium-activated potassium channels. The protein encoded by this gene is activated before membrane hyperpolarization and is thought to regulate neuronal excitability by contributing to the slow component of synaptic AHP. This gene is a member of the KCNN family of potassium channel genes. The encoded protein is an integral membrane protein that forms a voltage-independent calcium-activated channel with three other calmodulin-binding subunits. Alternate splicing of this gene results in multiple transcript variants. [provided by RefSeq, May 2013]

Product images:



Circular map for RG213670