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Product datasheet for SC118769

GIRK1 (KCNJ3) (NM_002239) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GIRK1 (KCNJ3) (NM_002239) Human Untagged Clone
Tag:	Tag Free
Symbol:	GIRK1
Synonyms:	GIRK1; KGA; KIR3.1
Mammalian Cell Selection:	None
Vector:	pCMV6-XL5
E. coli Selection:	Ampicillin (100 ug/mL)

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Fully Sequenced ORF:

>OriGene ORF within SC118769 sequence for NM_002239 edited (data generated by NextGen Sequencing)

ATGTCTGCACTCCGAAGGAAATTTGGGGACGATTATCAGGTAGTGACCACATCGTCCAGC
GGCTCGGGCTTGCAGCCCCAGGGGCCAGGCCAGGACCCTCAGCAGCAGCTTGTGCCCAAG
AAGAAGCGGCAGCGGTTCGTGGACAAGAACGGCCGGTGCAATGTACAGCACGGCAACCTG
GGCAGCGAGACAAGCCGCTACCTCTCGGACCTCTTCACCACGCTGGTGGACCTCAAGTGG
CGCTGGAACCTCTTCATCTTCATTCTCACCTACACCGTGGCCTGGCTTTTCATGGCGTCC
ATGTGGTGGGTGATCGCCTACACTCGGGGCGACCTGAACAAAGCCCACGTCGGTAACTAC
ACGCCTTGCGTGGCCAATGTCTATAACTTCCCTTCTGCCTTCCTCTTCTTCATCGAGACG
GAGGCCACCATCGGCTATGGCTACCGATACATCACAGACAAGTGCCCCGAGGGCATCATC
CTCTTCCTCTTCCAGTCCATCCTGGGCTCCATCGTGGACGCCTTCCTCATCGGCTGCATG
TTCATCAAGATGTCCCAGCCCAAGAAGCGCGCCGAGACCCTCATGTTCAGCGAGCACGCG
GTGATCTCCATGAGGGACGGAAAACTCACGCTTATGTTCCGGGTGGGCAACCTGCGCAAC
AGCCACATGGTCTCCGCGCAGATTCGCTGCAAGCTGCTCAAATCTCGGCAGACACCTGAG
GGTGAGTTCCTTCCCCTTGACCAACTTGAACTGGATGTAGGTTTTAGTACAGGGGCAGAT
CAACTTTTTCTTGTGTCCCCCCTCACAATTTGCCACGTGATCGATGCCAAAAGCCCCTTT
TATGACCTATCCCAGCGAAGCATGCAAACTGAACAGTTCGAGATTGTCGTCATCCTAGAA
GGCATTGTGGAAACAACTGGGATGACTTGTCAAGCTCGAACATCATATACTGAAGATGAA
GTTCTTTGGGGTCATCGTTTTTTTCCTGTAATTTCCTTAGAAGAGGGATTCTTTAAAGTT
GATTACTCCCAGTTCCATGCAACATTTGAAGTCCCCACCCCACCTTACAGTGTGAAAGAG
CAGGAGGAAATGCTTCTCATGTCGTCCCCTTTAATAGCACCAGCCATAACTAACAGCAAA
GAAAGACATAATTCTGTGGAATGCTTAGATGGACTAGATGATATTACTACAAAACTACCA
TCTAAGCTGCAGAAAATTACTGGAAGAGAAGACTTTCCCAAAAAACTCTTGAGGATGAGT
TCTACAACTTCAGAAAAAGCCTACAGCTTGGGAGACTTGCCCATGAAACTTCAACGAATA
AGTTCAGTTCCGGGCAACTCAGAAGAAAAACTGGTATCTAAAACCACCAAGATGTTATCT
GATCCCATGAGCCAGTCTGTGGCTGATTTGCCACCAAAGCTTCAAAAGATGGCTGGAGGA
GCAGCTAGGATGGAAGGGAACCTTCCAGCCAAATTAAGAAAAATGAACTCTGATCGCTTC
ACATAA

Clone variation with respect to NM_002239.2

5' Read Nucleotide Sequence:

>OriGene 5' read for NM_002239 unedited

GCATTTGTATACGACTCCTATAGGGCGGCCGCGATTCGGCACGAGGGTGACCCGGGATGC
CGGTGGTGGGGAAAGAAAAGAGAGCCTCTGGAAGCTTGGAGGCAAAATTGCGCTTGGGTT
CCTGTTCCTTGCATCCCTCCTGGCTTGAGTGCGGGAGAACACTTTTTAAAGACTCACCTT
GGAAAGAAGGCCTCCGTCCCAGGGGAGAAGGAGAGGCGTCTGCAGGGGGCAGAGACCGCA
GCTACCTGCCGGGTGCGCCCCCCACCCAGGAGCGCTCGCTTCGCCCCCTTTCCTCCCCCG
CCCCCACCTCCTTATTGGTGCTAGTTTGCAGCGCCCAGCTCCTGCGCCTTCGCTTCGCGT
TTGAATCTGGCTCGCCCCTTCGTATTATGTCTGCACTCCGAAGGAAATTTGGGGACGATT
ATCAGGTAGTGACCACATCGTCCAGCGGCTCGGGCTTGCAGCCCCAGGGGCCAGGCCAGG
ACCCTCAGCAGCAGCTTGTGCCCAAGAAGAAGCGGCAGCGGTTCGTGGACAAGAACGGCC
GGTGCAATGTACAGCACGGCAACCTGGGCAGCGAGACAAGCCGCTACCTCTCGGACCTCT
TCACCACGCTGGTGGACCTCAAGTGGCGCTGGAACCTCTTCATCTTCATTCTCACCTACA
CCGTGGCCTGGCTTTTCATGGCGTCCATGTGGTGGGGTGATCGCCTACACTCGGNGCGAC
CTGAACAAGCCCACGTCGGTAACTACACGCCTTGCGTGGCCAATGTCTATAACTTCCTTN
CTGCCTTCCTCTTCTTCATCGAGACGGAGGCCACCATCGGCTATGGCTACCGATACATCA
CAGACAAGTGCCCCCGAGGCATCATNCTCTTCCTCTTNCAGNCCATNCTGGGCTCCATCG
GGGGN

3' Read Nucleotide Sequence:

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>OriGene 3' read for NM_002239 unedited
CTCCCCACCCCCCCCACCCACCTTTTTCCCTCCTTACACACAATTTGACTTTGNACCGCG
GNCCGCATACTAGNGATCGGTTTTTTTTTTTTTTTTTTGAAATGTTTCCAATTTACTCAG
TTTGGAACAGGGACAATTAATTGTGTAACTTCACACAGATTCTGATATATTCAATATAAC
TTGGCTACTGTCTATTAACATGATTCAGTGTTTGTTCAGAGCTCATCTTTGTATTAGATC
ATATACAAAACAGATTTCCAGATTTTAATTAGTCTAGGAAAGGAATAATTCTCAAATTAA
TCAACAATTATTTCTCCCCAGTACTAGCAACTTTTAAAAATCATAAGAAATGTTCAATGC
TATACTGAGATCTGGTATGCTCTAAAATTTACAATTTAAACATGTAATGGTTATATTTTT
GCAGGGCCATAGATAGCACAAACTTGTGTGATTCTCTCATATAAAATACAATTGAAAGCC
TCCCAAGACCTTAAACAGCAGAAAACATTAAATCACATTTTAAAATGACAAAAATTTAAG
GCTAAAATATTTGGTATTAATAATTAATGCCAGTAGCCTTCCTACTCTAATAAAGTAAAC
ATGCACAAGAACTACAACTTTGAACAAACCTCACAATTTTTATCAGATATATATGCATGT
ATGTATGACTGCGGATGTATGTGCATATATATATGCAAAAGGCCGGGCCACCTTACCCCC
CCCCCCATCCCCCCTCCTTTTCATCCCCCTCGTCCTGCCACATTACTCCCCTCTGTCCCG
GGGTTACTACCATTTCGTCAGAACGCTCCCCCTTGACGCTCCTATCTTTCACACTCTTAC
AATTCCATTTTCATATTCCCTAACTTTCCCTGTCCCCTTTCTCTCCTCCCCGCCCCCCTG
TCCTCATTCTCAAAGGCGTCACCTTCCCCCTTCATCCTCCTCCTCTACGTCCCACCCCTC
GCCACCATCCTCAAG
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Restriction Sites: NotI-NotI

ACCN: NM_002239

Insert Size: 2870 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

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_002239.2, NP_002230.1

RefSeq Size:	2890 bp
RefSeq ORF:	1506 bp
Locus ID:	3760
UniProt ID:	P48549
Cytogenetics:	2q24.1
Domains:	IRK
Protein Families:	Druggable Genome, Ion Channels: Potassium, Transmembrane
Gene Summary:	Potassium channels are present in most mammalian cells, where they participate in a wide range of physiologic responses. The protein encoded by this gene is an integral membrane protein and inward-rectifier type potassium channel. The encoded protein, which has a greater tendency to allow potassium to flow into a cell rather than out of a cell, is controlled by G-proteins and plays an important role in regulating heartbeat. It associates with three other G-protein-activated potassium channels to form a heteromultimeric pore-forming complex that also couples to neurotransmitter receptors in the brain and whereby channel activation can inhibit action potential firing by hyperpolarizing the plasma membrane. These multimeric G-protein-gated inwardly-rectifying potassium (GIRK) channels may play a role in the pathophysiology of epilepsy, addiction, Down's syndrome, ataxia, and Parkinson's disease. Alternative splicing results in multiple transcript variants encoding distinct proteins. [provided by RefSeq, May 2012] Transcript Variant: This variant (1) represents the longest transcript and encodes the longest isoform (1; also known as GIRK1a). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.