

Product datasheet for **RG205322**

GIRK1 (KCNJ3) (NM_002239) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GIRK1 (KCNJ3) (NM_002239) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GIRK1
Synonyms:	GIRK1; KGA; KIR3.1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG205322 representing NM_002239
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTCTGCACTCCGAAGGAAATTTGGGACGATTATCAGGTAGTGACCACATCGTCCAGCGGCTCGGGCT
 TGCAGCCCCAGGGCCAGGCCAGGACCCTCAGCAGCAGCTTGTGCCCAAGAAGAAGCGGCAGCGGTTTCGT
 GGACAAGAACGGCCGGTGAATGTACAGCACGGCAACCTGGGCAGCGAGACAAGCCGCTACCTCTCGGAC
 CTCTTACCACGCTGGTGGACCTCAAGTGGCGCTGGAACCTTTCATCTTATTCTCACCTACACCGTGG
 CCTGGCTTTTTCATGGCGTCCATGTGGTGGGTGATCGCCTACACTCGGGGCGACCTGAACAAAGCCACGT
 CGGTAACACACGCTTGGCTGGCCAATGTCTATAACTCCCTTTCGCTTCTCTTCTTTCATCGAGACG
 GAGGCCACCATCGGCTATGGCTACCGATACATCACAGACAAGTCCCCGAGGGCATCATCTCTTCTCT
 TCCAGTCCATCTGGGCTCCATCGTGGACGCTTCTCTCATCGGCTGCATGTTTCATCAAGATGTCCCAGCC
 CAAGAAGCGCGCCGAGACCTCATGTTCCAGCGAGCAGCGGTGATCTCCATGAGGGACGGAAAACCTCAG
 CTTATGTTCCGGGTGGGCAACCTGCGCAACAGCCACATGGTCTCCGCGCAGATTCGCTGCAAGCTGCTCA
 AATCTCGGCAGACACCTGAGGGTGAATTCCTTCCCTTGACCAACTTGAAGTGGATGTAGGTTTTAGTAC
 AGGGGCGAGATCAACTTTTTCTTGTGCCCCCTCACAATTCGCCACGTGATCGATGCCAAAAGCCCTTT
 TATGACCTATCCCAGCGAAGCATGCAAACTAAACAGTTCGAGATTGTCGTCATCTAGAAAGCATTGTGG
 AAACAACGGGATGACTTGTCAAGCTCGAACATCATATACTGAAGATGAAGTCTTTGGGGTCATCGTTT
 TTTTCTGTAATTTCTTAGAAGAGGGATTCTTTAAAGTTGATTACTCCCAGTCCACGCAACATTTGAA
 GTCCCCACCCACCTTACAGTGTAAAGAGCAGGAGGAAATGCTTCTCATGTCGTCCTTTAATAGCAC
 CAGCCATAACTAACAGCAAAGAAAGACATAATTTCTGTGGAATGCTTAGATGGACTAGATATTACTAC
 AAACTACCATCTAAGCTGCAGAAAATTACTGGAAGAGAAGACTTCCCAAAAACTCTTGAGGATGAGT
 TCTACAACCTCAGAAAAAGCCTACAGCTTGGGAGACTTGCCCATGAAACTCAACGAATAAGTTCAGTTC
 CGGGCAACTCAGAAGAAAACTGGTATCTAAAACCACCAAGATGTTATCTGATCCCATGAGCCAGTCTGT
 GGCTGATTTGCCACAAAGCTTCAAAGATGGCTGGAGGAGCAGCTAGGATGGAAGGGAACCTTCCAGCC
 AAATTAAGAAAAATGAAGTCTGATCGTTCACA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG205322 representing NM_002239
 Red=Cloning site Green=Tags(s)

MSALRRKFGDDYQVVTSSSGSLQPQPGQDPQQQLVPKKRQRFVDKNGRCNVQHNLGSETSRYLSD
 LFTTLVDLKWVWNLFIILTYTVAWLFMASMWWIAYTRGDLNKAHVGNYPVCVANVYNFSAFLFFIET
 EATIGYGYRYITDKPEGIILFLFQSILGSIVDAFLIGCMFIKMSQPKKRAETLMFSEHAVISMVDGKLT
 LMFVRVGNLRNSHMVSAQIRCKLLKSRQTPGEFPLDQLELDVGFSTGADQLFLVSPLTIRHVIDAKSPF
 YDLSQRSMQTKQFEIVVILEGIVETGTMTCQARTSYTEDEVLWHRFPVVISLEEGFFKVDYSQFHATFE
 VPTPPYSVKEQEEMLLMSSPLIAPAITSKERHNSVECLDGLDDITTKLPSKLQKITGREDFPKLLRMS
 STTSEKAYSLGDLPMKLQRISVPGNSEEKLVSKTTKMLSDPMSQSVADLPPKLQKMAGGAARMENLPA
 KLRKMNSDRFT

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-Mlul

Cloning Scheme:


ACCN: NM_002239

ORF Size: 1503 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_002239.2](#), [NP_002230.1](#)

RefSeq Size: 2890 bp

RefSeq ORF: 1506 bp

Locus ID: 3760

UniProt ID: [P48549](#)

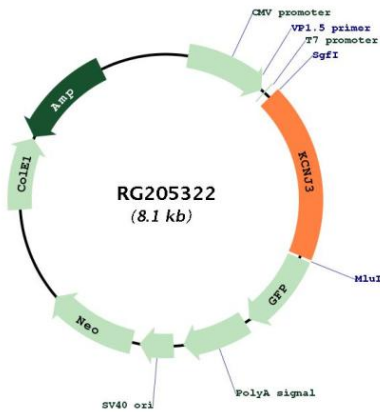
Cytogenetics: 2q24.1

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]

Product images:



Circular map for RG205322