

## Product datasheet for **RG233507**

### **GIRK1 (KCNJ3) (NM\_001260508) Human Tagged ORF Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** GIRK1 (KCNJ3) (NM\_001260508) 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)  
**ORF Nucleotide Sequence:** >RG233507 representing NM\_001260508  
**Red=Cloning site Blue=ORF Green=Tags(s)**

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCTGCACTCCGAAGGAAATTTGGGGACGATTATCAGGTAGTGACCACATCGTCCAGCGGCTCGGGCT  
TGCAGCCCCAGGGGCCAGGCCAGGACCCTCAGCAGCAGCTTGCCCAAGAAGAAGCGGCAGCGGTTTCGT  
GGACAAGAACGGCCGGTGAATGTACAGCACGGCAACCTGGGCAGCGAGACAAGCCGCTACCTCTCGGAC  
CTCTTCACCACGCTGGTGGACCTCAAGTGGCGCTGGAACCTCTTCATCTTCATTCTCACCTACACCGTGG  
CCTGGCTTTTCATGGCGTCCATGTGGTGGTGATCGCCTACACTCGGGGCGACCTGAACAAAGCCCACGT  
CGGTAACCTACACGCTTTCGTGGCCAATGTCTATAACTTCCTTCTGCCTTCCTCTCTTCATCGAGACG  
GAGGCCACCATCGGCTATGGCTACCGATACATCACAGACAAGTGCCTCGAGGGCATCATCTCTCTCTCT  
TCCAGTCCATCTGGGCTCCATCGTGGACGCTTCCTCATCGGCTGCATGTTTCATCAAGATGTCCCAGCC  
CAAGAAGCGCGCCGAGACCCTCATGTTTCAGCGAGCACGCGGTGATCTCCATGAGGGACGGAAAACTCAGC  
CTTATGTTCCGGTGGGCAACCTGCGCAACAGCCACATGGTCTCCGCGCAGATTCGCTGCAAGCTGCTCA  
AAGGA

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA



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**Protein Sequence:** >RG233507 representing NM\_001260508  
 Red=Cloning site Green=Tags(s)

MSALRRKFGDDYQVVTSSSGSGLQPQPGQDPQQQLVPKKRQRFVDKNGRCNVQHNLGSETSRYLSD  
 LFTTLVDLKWRWNLFIILTYTVAWLFMASMWWVIAYTRGDLNKAHVGNYPVCVANVYNFPSAFLFFIET  
 EATIGYGRYITDKCPEGIILFLFQSIILGSIVDAFLIGCMFIKMSQPKKRAETLMFSEHAVISMRDGKLT  
 LMFVRVGNLRNSHMVSAQIRCKLLKG

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shutting:



**ACCN:** NM\_001260508

**ORF Size:** 705 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\\_001260508.1](#), [NP\\_001247437.1](#)

**RefSeq Size:** 4523 bp

**RefSeq ORF:** 708 bp

**Locus ID:** 3760

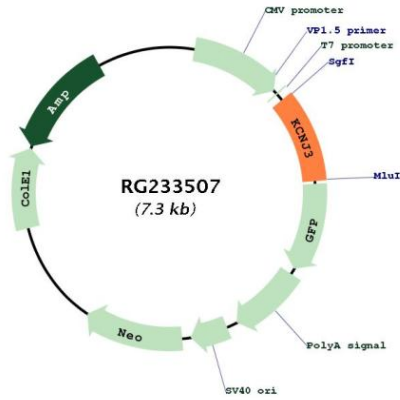
**UniProt ID:** [P48549](#)

**Cytogenetics:** 2q24.1

**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 RG233507