

Product datasheet for **RG210938**

GIRK2 (KCNJ6) (NM_002240) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GIRK2 (KCNJ6) (NM_002240) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	GIRK2
Synonyms:	BIR1; GIRK-2; GIRK2; hiGIRK2; KATP-2; KATP2; KCNJ7; KIR3.2; KPLBS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG210938 representing NM_002240 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCCAAGCTGACAGAATCCATGACTAACGTCCTGGAGGGCGACTCCATGGATCAGGACGTCGAAAGCC
CAGTGGCCATTACCAGCCAAAGTTGCCTAAGCAGGCCAGGGATGACCTGCCAAGACACATCAGCCGAGA
TCGGACAAAAGGAAAAATCCAGAGGTACGTGAGGAAAGACGGAAAGTGAATGTTTCATCACGGCAACGTG
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TGATTTTTGTCATGGTTTACACAGTGACCTGGCTCTTTTTTGAATGATCTGGTGGTTGATCGCATACAT
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GCCCGGAGGGAATTATTCTTCTCTTAATCCAATCTGTGTTGGGGTCCATTGTCAATGCATTATGGTGGG
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GACGGATATCAACGTAGGGTATTACACGGGGATGACCGTCTGTTCTGGTGTACCCGCTGATCATTAGC
CATGAAATTAACCAACAGAGTCTTTCTGGGAGATCTCCAAAGCCAGCTGCCAAAGAGGAACTGGAAA
TTGTGGTCATCCTAGAAGGAATGGTGGAAAGCCACAGGGATGACATGCCAAGCTCGAAGCTCCTACATCAC
CAGTGAGATCCTGTGGGTTACCGGTTACACCTGTCCTGACCCTGGAGGACGGTTCTACGAAGTTGAC
TACAACAGCTTCCATGAGACCTATGAGACCAGCACCCCATCCCTTAGTGCCAAAGAGCTGGCCGAGTTAG
CCAGCAGGGCAGAGCTGCCCTGAGTTGGTCTGTATCCAGCAAATCAACCAACATGCAGAACTGGAGAC
TGAAGAGGAAGAAAAGAACCTCGAAGAGCAAACAGAAAGAAATGGTGATGTGGCAAACCTGGAGAATGAA
TCCAAAGTT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG210938 representing NM_002240
 Red=Cloning site Green=Tags(s)

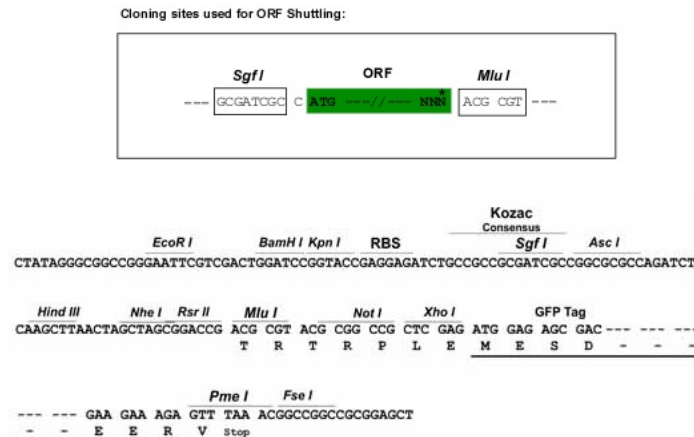
MAKLTESMTNVLEGDSDQDVESPVAIHQPKLPKQARDDLPRHISRDRTRKRIQRYVVRKDGKCNVHHGNV
 RETYRYLTDIFFTLVLDKWRFNLLIFVMVYTVTWLFFGMIWWLIAYIRGDMDHIEDPSWTPCVTNLNGFV
 SAFLFSIETETTIGYGYRVITDKCEGIILLIIQSVLGSIVNAFMVGCMEVKISQPKKRAETLVFSTHAV
 ISMRDGKLCLMFRVGDRLRNHSHIVEASIRAKLIKSKQTSEGEFIPLNQTDIRVGYTGDRLFLVSPLIIS
 HEINQQSPFWEISKAQLPKEELEIVVILEGMVEATGMTQCQARSSYITSEILWGYRFPVLTLEDGFYEVD
 YNSFHETYETSTPSLSAKELAEASRAELPLSWSVSSKLNQHAELTEEEEEKNLEEQTERNGDVANLENE
 SKV

TRTRPLE – GFP Tag – V

Restriction Sites:

SgfI-MluI

Cloning Scheme:



ACCN: NM_002240

ORF Size: 1269 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_002240.2](#), [NP_002231.1](#)

RefSeq Size: 2485 bp

RefSeq ORF: 1272 bp

Locus ID: 3763

UniProt ID: [P48051](#)

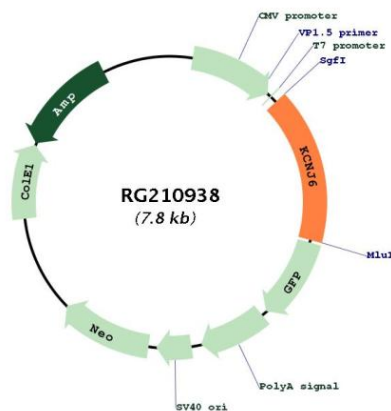
Cytogenetics: 21q22.13

Domains: IRK

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

Gene Summary: This gene encodes a member of the G protein-coupled inwardly-rectifying potassium channel family of inward rectifier potassium channels. This type of potassium channel allows a greater flow of potassium into the cell than out of it. These proteins modulate many physiological processes, including heart rate in cardiac cells and circuit activity in neuronal cells, through G-protein coupled receptor stimulation. Mutations in this gene are associated with Keppen-Lubinsky Syndrome, a rare condition characterized by severe developmental delay, facial dysmorphism, and intellectual disability. [provided by RefSeq, Apr 2015]

Product images:



Circular map for RG210938