

## Product datasheet for **RC210938**

### **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:	Myc-DDK
Symbol:	GIRK2
Synonyms:	BIR1; GIRK-2; GIRK2; hiGIRK2; KATP-2; KATP2; KCNJ7; KIR3.2; KPLBS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC210938 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGCCAAGCTGACAGAATCCATGACTAACGTCCTGGAGGGCGACTCCATGGATCAGGACGTCGAAAGCC  
 CAGTGGCCATTCACCAGCCAAAGTTGCCTAAGCAGGCCAGGGATGACCTGCCAAGACACATCAGCCGAGA  
 TCGGACAAAAGGAAAATCCAGAGGTACGTGAGGAAAGACGAAAAGTGAATGTTTCATCAGCGCAACGTG  
 AGGGAGACCTATCGCTACCTGACCGATATCTTACCACATTAGTGGACCTGAAGTGGAGATTCAACCTAT  
 TGATTTTTGTCATGGTTTACACAGTGACCTGGCTCTTTTTTGAATGATCTGGTGGTTGATCGCATAACAT  
 ACGGGGAGACATGGACCACATAGAGGACCCCTCCTGGACTCCTTGTGTTACCAACCTCAACGGGTTGCTC  
 TCTGCTTTTTTATTCTCAATAGAGACAGAAACCACCATGGTTATGGCTACCGGGTCATCACAGATAAAT  
 GCCCGGAGGAATTATTCTCTTAATCCAATCTGTGTTGGGGTCCATTGTCAATGCATTCATGGTGGG  
 ATGCATGTTTGTAAAAATCTCTCAACCAAGAAGAGGGCAGAGACCCTGGTCTTTTCCACCCATGCAGTG  
 ATCTCCATGCGGGATGGGAAACTGTGCCTGATGTTCCGGGTAGGGGACCTTAGGAATCCACATTTG  
 AGGCTTCCATCAGAGCCAAGTTGATCAAATCCAACAGACCTCGGAGGGGAGTTTCATCCCGTTGAACCA  
 GACGGATCAACGTAGGGTATTACACGGGGATGACCGTCTGTTTCTGGTGTACCCGCTGATCATTAGC  
 CATGAAATTAACCAACAGAGTCTTTCTGGGAGATCTCCAAGCCAGCTGCCAAAGAGGAACTGGAAA  
 TTGTGGTCATCTAGAAGGAATGGTGAAGCCACAGGGATGACATGCCAAGCTCGAAGCTCCTACATCAC  
 CAGTGAGATCCTGTGGGGTTACCGGTTACACCTGTCTGACCTGGAGGACGGGTTCTACGAAGTTGAC  
 TACAACAGCTTCCATGAGACCTATGAGACCAGCACCCCATCCCTAGTGCCAAAGAGCTGGCCGAGTTAG  
 CCAGCAGGGCAGAGCTGCCCTGAGTTGGTCTGTATCCAGCAAACCTCAACCAACATGCAGAACTGGAGAC  
 TGAAGAGGAAGAAAAGAACCTCGAAGAGCAAACAGAAAGAAATGGTATGTGGCAACCTGGAGAATGAA  
 TCCAAAGTT

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC210938 protein sequence  
 Red=Cloning site Green=Tags(s)

MAKLTESMTNVLEGDMSDQDVESPVAIHQPKLPKQARDDLPRHISRDRTRKRIQRYVRKDGKCNVHHGNV  
 RETYRYLTDIFTTLDLKWRFNLLIFVMVYTVTWLFFGMIWWLIAYIRGMDMHIEDPSWTPCVTNLNGFV  
 SAFLFSIETETTIGYGYRVITDKCPEGIILLLIQSVLGSIVNAFMVGCMEVKISQPKKRAETLVFSTHAV  
 ISMRDGKLCLMFRVGLRNSHIVEASIRAKLIKSKQTSEGEFIPLNQTDINVGYTGDRLFLVSPLIIS  
 HEINQQSPFWEISKAQLPKEELEIVVILEGMVEATGMTQCQARSSYITSEILWGYRFPVLTLEDGFYEVD  
 YNSFHETYETSTPSLSAKELAELASRAELPLSWSVSSKLNQHALETEEEEEKNLEEQTERRNGDVANLENE  
 SKV

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6008\\_b09.zip](https://cdn.origene.com/chromatograms/mk6008_b09.zip)

**Restriction Sites:**

Sgfl-Mlul

**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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_002240.5](#)

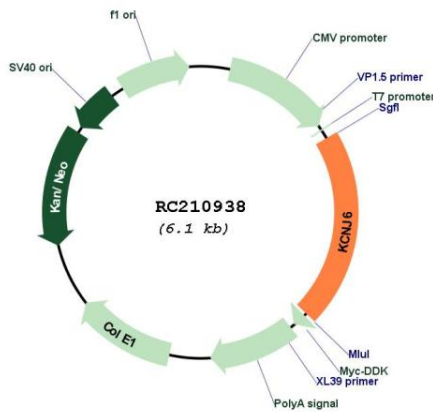
**RefSeq Size:** 2537 bp

**RefSeq ORF:** 1272 bp

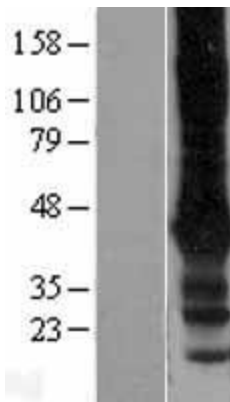
**Locus ID:** 3763

**UniProt ID:** [P48051](#)  
**Cytogenetics:** 21q22.13  
**Domains:** IRK  
**Protein Families:** Druggable Genome, Ion Channels: Potassium, Transmembrane  
**MW:** 48.5 kDa  
**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]

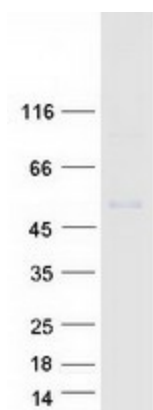
### Product images:



Circular map for RC210938



Western blot validation of overexpression lysate (Cat# [LY400812]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210938 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified KCNJ6 protein (Cat# [TP310938]). The protein was produced from HEK293T cells transfected with KCNJ6 cDNA clone (Cat# RC210938) using MegaTran 2.0 (Cat# [TT210002]).