

## Product datasheet for **RC222272**

### **KIR2.3 (KCNJ4) (NM\_004981) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	KIR2.3 (KCNJ4) (NM_004981) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	KIR2.3
Synonyms:	HIR; HIRK2; HRK1; IRK-3; IRK3; Kir2.3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC22272 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGCACGGACACAGCCGCAACGGCCAGGCCACGTGCCCGCGGAAGCGCCGAACCGCTTCGTC AAGA  
 AGAACGGCCAATGCAACGTGTACTTCGCCAACCTGAGCAACAAGTCGACGCGCTACATGGCGGACATCTT  
 CACCACCTGCGTGGACACGCGCTGGCGCTACATGCTCATGATCTTCTCCGCGCCTTCTCTTGTCTCTGG  
 CTCTTTTTCGGCCTCCTTCTGGTGTATCGCCTTCTCCACGGTGACCTGGAGGCCAGCCAGGGGTGC  
 CTGCGCGGGGGCCCGCGCGGGTGGTGGCGGAGCAGCCCGGTGGCCCCAAGCCCTGCATCATGCA  
 CGTGAACGGCTTCTGGTGCCTTCTGTTCTCGGTGGAGACGCAGACGACCATCGGCTATGGGTTCCGG  
 TGCGTGACAGAGGAGTCCCCGTGGCAGTCATCGCTGTGGTGGTCCAGTCCATCGTGGGTGCGTCATCG  
 ACTCCTTCATGATTGGCACCATCATGGCCAAGATGGCGCGCCCAAGAAGCGGGCGCAGACGTTGCTGTT  
 CAGCCACCACGCGGTCAATTCGGTGCAGCAGGCAAGCTCTGCCATGTGGCGGTGGCAACCTGCGC  
 AAGAGCCACATTTGGAGGCCACGTGCGGGCCAGCTCATCAAGCCCTACATGACCAGGAGGGCGAGT  
 ACCTGCCCTGGACCAGCGGGACCTCAACGTGGGCTATGACATCGGCCTGGACCGCATCTTCTGGTGTG  
 GCCCATCATATTGTCCACGAGATCGACAGGACAGCCCGCTTTATGGCATGGGCAAGGAGGAGCTGGAG  
 TCGGAGGACTTTGAGATCGTGGTTCATCTGGAGGGCATGGTGGAGGCCACGGCCATGACCACCCAGGCC  
 GCAGCTCTACCTGGCCAGCGAGATCCTGTGGGGCCACCCTTTGAGCCTGTGGTCTTCGAGGAGAAGAG  
 CCACTACAAGTGGACTACTCGGTTTTACAAGACCTACGAGGTGGCCGGCAGCCCTGCTGCTCGGCC  
 CGGGAGCTGCAGGAGAGTAAGATCACCGTGTGCCCGCCACCCTCCAGTGCCTTCTGCTACG  
 AGAACGAGCTGGCCCTTATGAGCCAGGAGGAAGAGGAGATGGAGGAGGAGGCAGCTGCGGGCGCGCGT  
 GGCCGACGGCCTGGGCTGGAGCGGGTTCCAAGGAGGAGGCGGGCATCATCCGGATGCTGGAGTTCGGC  
 AGCCACCTGGACCTGGAGCGCATGCAGGCTTCCCTCCCGCTGGACAACATCTCTACCGCAGGGAGTCTG  
 CCATC

**ACGCGT**ACGCGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC22272 protein sequence  
 Red=Cloning site Green=Tags(s)

MHGHSRNGQAHVPRRKRNRNFVKKNGQCNVYFANLSNKSQRYMADIFTTCDTRWRYMLMIFSAFLVSW  
 LFFGLLFWCIAFFHGDLEASPGVPAAGGPAAGGGGAAPVAPKPCIMHVNGFLGAFVSVETQTTIGYGR  
 CVTEECPLAVIAVVVQSIIVGCVIDSFMIGTIMAKMARPKKRAQTLFSSHAVISVRDGLCLMWRVGNLR  
 KSHIVEAHVRAQLIKPYMTQEGEYLPDQRDLNMGYDIGLDRIFLVSPHIIIVHEIDEDSPLYGMGKEELE  
 SEDFEIVVILEGMVEATAMTTQARSSYLASEILWGRFEPVVFEEKSHYKVDYSRHFHKTYEVAGTPCCSA  
 RELQESKITVLPAPPPPSAFCYENELALMSQEEEEEMEEAAAAAAVAAGLLEAGSKEEAGIIRMLEFG  
 SHLDLERMQASLPLDNISYRRESAI

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6610\\_b03.zip](https://cdn.origene.com/chromatograms/mk6610_b03.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_004981

**ORF Size:** 1335 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](mailto: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](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

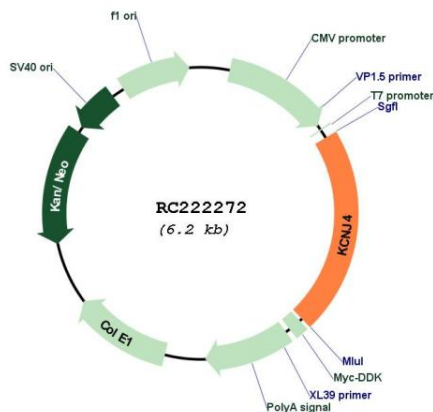
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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.

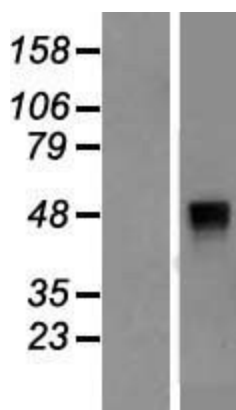
RefSeq:	<a href="#">NM_004981.1</a> , <a href="#">NP_004972.1</a>
RefSeq Size:	1913 bp
RefSeq ORF:	1338 bp
Locus ID:	3761
UniProt ID:	<a href="#">P48050</a>
Cytogenetics:	22q13.1
Protein Families:	Druggable Genome, Ion Channels: Potassium, Transmembrane
MW:	49.5 kDa

**Gene Summary:** Several different potassium channels are known to be involved with electrical signaling in the nervous system. One class is activated by depolarization whereas a second class is not. The latter are referred to as inwardly rectifying K<sup>+</sup> channels, and they have a greater tendency to allow potassium to flow into the cell rather than out of it. This asymmetry in potassium ion conductance plays a key role in the excitability of muscle cells and neurons. The protein encoded by this gene is an integral membrane protein and member of the inward rectifier potassium channel family. The encoded protein has a small unitary conductance compared to other members of this protein family. Two transcript variants encoding the same protein have been found for this gene. [provided by RefSeq, Jul 2008]

### Product images:



Circular map for RC222272



Western blot validation of overexpression lysate (Cat# [LY417610]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC222272 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).