

## Product datasheet for **RC212479**

### **KCNQ1 (NM\_181798) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	KCNQ1 (NM_181798) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	KCNQ1
Synonyms:	ATFB1; ATFB3; JLNS1; KCNA8; KCNA9; Kv1.9; Kv7.1; KVLQT1; LQT; LQT1; RWS; SQT2; WRS
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC212479 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGCATCGCC**

ATGGACTTCCTCATCGTCTGGTCTGCCTCATCTTCAGCGTGTGTCCACCATCGAGCAGTATGCCGCC  
 TGGCCACGGGACTCTCTTCTGGATGGAGATCGTGTGGTGTCTTCGGGACGGAGTACGTGGTCCG  
 CCTCTGGTCCGCCGCTGCCGACGAAAGTACGTGGGCCTCTGGGGCGGCTGCGCTTTGCCCGGAAGCCC  
 ATTTCCATCATCGACCTCATCGTGGTCTGGCCTCCATGGTGGTCTCTGCGTGGCTCCAAGGGGAGG  
 TGTTTCCACGTCCGCCATCAGGGGCATCCGCTTCTGCAGATCCTGAGGATGCTACACGTGACCCGCCA  
 GGGAGGCACCTGGAGGCTCCTGGGCTCCGTGGTCTTATCCACCGCCAGGAGCTGATAACCACCTGTAC  
 ATCGGCTTCTGGGCTCATCTTCTCCTCGTACTTTGTGTACCTGGCTGAGAAGGACGCGGTGAACGAGT  
 CAGGCCGCGTGGAGTTCGGCAGCTACGCAGATGCGCTGTGGTGGGGGTGGTACAGTACCACCATCGG  
 CTATGGGGACAAGGTGCCCCAGAGCTGGGTCGGGAAGACCATCGCTCCTGCTTCTGTCTTTGCCATC  
 TCCTTCTTTGCGCTCCCAGCGGGGATTCTTGGCTCGGGGTTTGCCTGAAGGTGCAGCAGAAGCAGAGGC  
 AGAAGCACTTCAACCGGAGATCCCGGGCGCAGCCTCACTCATTAGACCGCATGGAGGTGCTATGCTGC  
 CGAGAACCCGACTCCTCCACCTGGAAGATCTACATCCGGAAGGCCCGGAGCCACACTCTGCTGTCA  
 CCCAGCCCAAAACCAAGAAGTCTGTGGTGGTAAAGAAAAAAGTTCAAGCTGGACAAAGACAATGGGG  
 TGACTCCTGGAGAGAAGTGTACAGTCCCCATACACGTGCGACCCCGAGAAGAGCGGGCGGCTGGA  
 CCATTTCTCTGTGACGGCTATGACAGTCTGTAAAGGAAGAGCCCAACTGTGGAAGTGAAGTATGCC  
 CACATCTCACAGCTGCGGGAACACCATCGGGCCACCATTAAGGTCATTGACGCATGCAGTACTTTGT  
 GGCCAAGAAGAAATTCCAGCAAGCGCGGAAGCCTTACGATGTGCGGGACGTCATTGAGCAGTACTCGCAG  
 GGCCACCTCAACCTCATGGTGCATCAAGGAGCTGCAGAGGAGGCTGGACCACTCATTGGGAAGCCCT  
 CACTGTTTCTCCGCTCAGAAAAGAGCAAGGATCGCGGCAGCAACACGATCGGCGCCCGCTGAACCG  
 AGTAGAAGACAAGGTGACGCAGCTGGACCAGAGGCTGGCACTCATCACCGACATGCTTACCAGCTGCTC  
 TCCTTGCACGGTGGCAGCACCCCGGCAGCGGGCGCCCGCCAGAGAGGGGGGGCCACATCACCCAGC  
 CCTGCGGAGTGGCGGCTCCGTGACCCCTGAGCTCTTCTGCCAGCAACACCCTGCCACCTACGAGCA  
 GCTGACCGTGCCAGGAGGGGCCCGATGAGGGTCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC212479 protein sequence  
 Red=Cloning site Green=Tags(s)

MDFLIVLVCLIFSVLSTIEQYAALATGTLFWMEIVLVVFFGTEYVRLWSAGCRSKYVGLWGRLRFARKP  
 ISIIDLIVVASMVVLVCGSKQVVFATSAIRGIRFLQILRMLHVDRQGGTWRLGSLVVFVHRQELITTLTY  
 IGFLGLIFSSYFVYLAEKDAVNESGRVEFGSYADALWGWVTVTTIGYGDKVPQTWVGKTIASCFVFAI  
 SFFALPAGILGSGFALKVQKQKQKHFNRQIPAAASLIQTAWRCYAAENPDSSTWKIYIRKAPRSHLLS  
 PSPKPKKSVVVKKKFKLDKNGVTPGEKMLTVPHITCDPPEERRLDHFSVDGYDSSVRKSPTLLEVSMP  
 HFMRTNSFAEDLDLEGETLLTPIITHISQLREHHRATIKVIRRMQYFVAKKKFQARKPYDVRDVEIQYSQ  
 GHLNLMVRIKELQRRLDQSIGKPSLFI SVSEKSKDRGSNTIGARLNRVEDKVTQLDQRLALITDMLHQLL  
 SLHGGSTPGSGGPPREGGAHITQPCGSGSVDPPELFLPSNTLPTYEQLTVPRRGPDEGS

**TR**TRPLEQKLI SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6609\\_d08.zip](https://cdn.origene.com/chromatograms/mk6609_d08.zip)

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_181798

**ORF Size:** 1647 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\\_181798.1](#), [NP\\_861463.1](#)

**RefSeq Size:** 3029 bp

**RefSeq ORF:** 1650 bp

**Locus ID:** 3784

**UniProt ID:** [P51787](#)

**Cytogenetics:** 11p15.5-p15.4

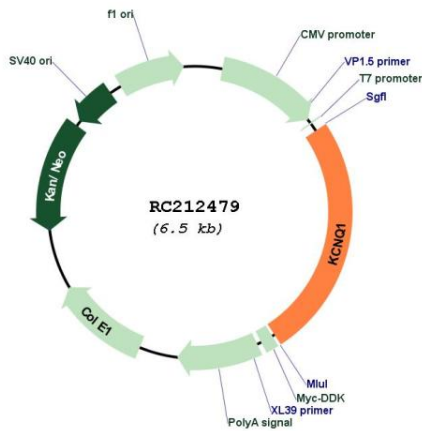
**Protein Families:** Druggable Genome, Ion Channels: Potassium, Transmembrane

**Protein Pathways:** Vibrio cholerae infection

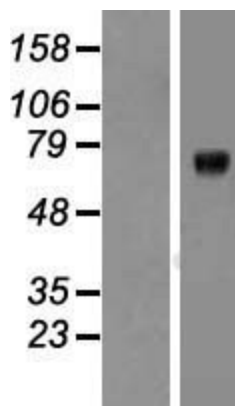
**MW:** 61.5 kDa

**Gene Summary:** This gene encodes a voltage-gated potassium channel required for repolarization phase of the cardiac action potential. This protein can form heteromultimers with two other potassium channel proteins, KCNE1 and KCNE3. Mutations in this gene are associated with hereditary long QT syndrome 1 (also known as Romano-Ward syndrome), Jervell and Lange-Nielsen syndrome, and familial atrial fibrillation. This gene exhibits tissue-specific imprinting, with preferential expression from the maternal allele in some tissues, and biallelic expression in others. This gene is located in a region of chromosome 11 amongst other imprinted genes that are associated with Beckwith-Wiedemann syndrome (BWS), and itself has been shown to be disrupted by chromosomal rearrangements in patients with BWS. Alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Aug 2011]

**Product images:**



Circular map for RC212479



Western blot validation of overexpression lysate (Cat# [LY405589]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC212479 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).