

Product datasheet for RC222266

CACNG2 (NM_006078) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CACNG2 (NM_006078) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CACNG2
Synonyms:	MRD10
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC222266 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGGGCTGTTTGATCGAGGTGTTCAAATGCTTTTAACCACCGTTGGTGCTTCGCTGCCTTCAGCCTGA
TGACCATAGCTGTGGAAACCGACTATTGGCTCTACTCCAGAGGGTTTGAAGACCAAAAGTGTCAGTGA
GAATGAAACAGCAAAAAGAACGAGGAAGTTATGACCCATTCCGGATTATGGAGAACCTGCTGCCTAGAA
GGGAATTTCAAAGTCTGTGCAAGCAAATTGATCACTTCCAGAGGATGCAGATTACGAAGCTGACACAG
CAGAATATTTCTCCGGCCGTGAGGGCTCCAGCATTTCCCAATCCTGAGTGTGATTCTGCTTTTCAT
GGGTGGCCTCTGCATCGCAGCCAGCGAGTTCTACAAAACCTGACACAACATCATCCTGAGTGCCGGCATC
TTCTTCGTGTCTGCAGGTCTGAGTAACATCATTGGCATCATAGTGTACATATCTGCCAATGCCGGAGACC
CCTCCAAGAGCGACTCCAAAAGAATAGTTACTCATACGGCTGGTCTTCTACTTCGGGGCCCTGTCTT
CATCATCGCCGAGATGGTCGGGGTGTGGCGGTGCACATGTTTATCGACCCGCACAAACAGCTGCGGGCC
ACGGCCCGCGCCACGGACTACCTCCAGGCCTTGCCATCACCCGCATCCCAGCTACCGTACCGTACC
AGCGCCGAGCCGCTCCAGCTCGCGCTCCACGGAGCCCTCACACTCCAGGGACGCTCCCCGTGGGCAT
CAAGGGCTTCAACACCTGCCGTCCACGGAGATCTCCATGTACACGCTCAGCAGGGACCCCTGAAGGCC
GCCACCAGCCCAACCGCACCTACAACCTCCGACAGGGATAACAGCTTCTCCAGTTCAACAAGTATCC
AGAAGGAGAACAAGGACTCTCTCACTCCAACACAGCCAACCGCCGGACCACCCCGTA

ACGCGTACGCGGCCGCTCGAGCAGAAAACCTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC222266 protein sequence
Red=Cloning site Green=Tags(s)

MGLFDRGVQMLLTTVGAFAAFSLMTIAVGTDYWLYSRGVCKTKSVSENETSKKNEEVMTHSGLWRTCCLE
 GNFKGLCKQIDHFPEDADYEADTAEYFLRAVRASSIFPILSVILLFMGGLCIAASEFYKTRHNIILSAGI
 FFVSAGLSNIIIGIIVYISANAGDPSKSDSKKNSYSYGSWFYFGALSFIIAEMVGLAVHMFIDRHKQLRA
 TARATDYLQASAITRIPSYRYRYQRRSRSSSRSTEPHSRSDASPVGIKGFNTLPSTEISMYTLSRDPLKA
 ATTPATYNSDRDNSFLQVHNCIQKENKDSLHSNTANRRRTPV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6609_a01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_006078

ORF Size: 969 bp

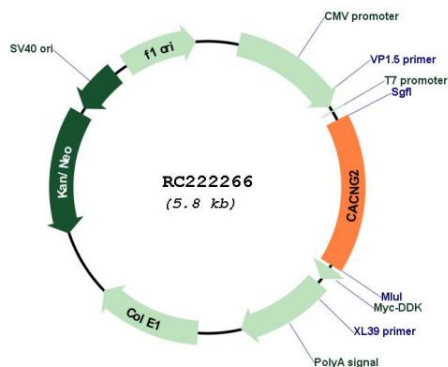
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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.

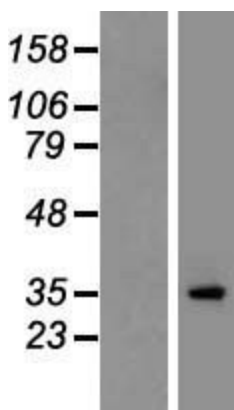
Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:	<ol style="list-style-type: none">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_006078.5
RefSeq Size:	4523 bp
RefSeq ORF:	972 bp
Locus ID:	10369
UniProt ID:	Q9Y698
Cytogenetics:	22q12.3
Protein Families:	Druggable Genome, Ion Channels: Other, Transmembrane
Protein Pathways:	Arrhythmogenic right ventricular cardiomyopathy (ARVC), Cardiac muscle contraction, Dilated cardiomyopathy, Hypertrophic cardiomyopathy (HCM), MAPK signaling pathway
MW:	36 kDa
Gene Summary:	<p>The protein encoded by this gene is a type I transmembrane AMPA receptor regulatory protein (TARP). TARPs regulate both trafficking and channel gating of the AMPA receptors. The AMPA subtype of ionotropic glutamate receptors are ligand gated ion channels that are typically activated by glutamate released from presynaptic neuron terminals and mediate fast neurotransmission in excitatory synapses. TARPs thus play an important role in synaptic plasticity, learning and memory. Mutations in this gene cause an autosomal dominant form of cognitive disability. [provided by RefSeq, Jul 2017]</p>

Product images:



Circular map for RC222266



Western blot validation of overexpression lysate (Cat# [LY416875]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC222266 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).