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Product datasheet for RC230662

CACNA2D2 (NM_001174051) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CACNA2D2 (NM_001174051) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	CACNA2D2
Synonyms:	CACNA2D; CASVDD
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC230662 representing NM_001174051
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCGGTGCCGGCTCGGACCTGCGGCGCCTCTCGGCCCGGCCCAGCGCGGACTGCGCGCCCCTGGCCCG
GCTGCGGCCCCCACCCTGGCCCCGGCACCCGGCGCCCGACGTCCGGGCCCCCGCGCCCGCTGTGGCTGCT
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Protein Sequence:

>RC230662 representing NM_001174051
Red=Cloning site Green=Tags(s)

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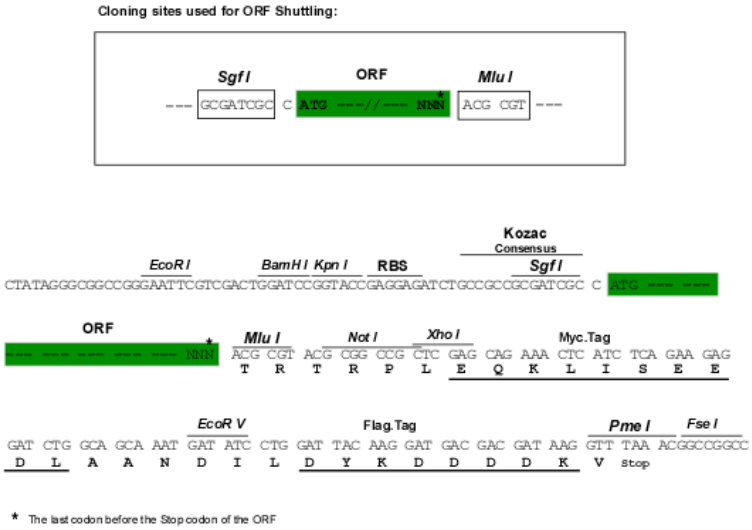
Chromatograms: https://cdn.origene.com/chromatograms/mk8007_d01.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

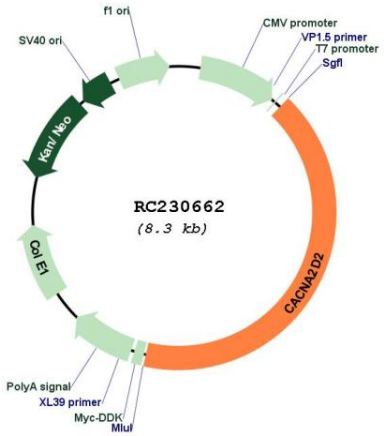


ACCN: NM_001174051

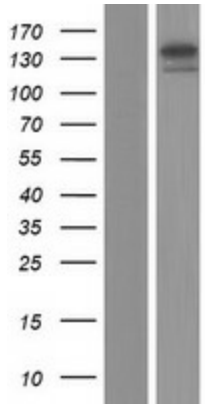
ORF Size: 3450 bp

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_001174051.3
RefSeq ORF:	3453 bp
Locus ID:	9254
UniProt ID:	Q9NY47
Cytogenetics:	3p21.31
Protein Families:	Druggable Genome, Ion Channels: Other
Protein Pathways:	Arrhythmogenic right ventricular cardiomyopathy (ARVC), Cardiac muscle contraction, Dilated cardiomyopathy, Hypertrophic cardiomyopathy (HCM), MAPK signaling pathway
MW:	130.3 kDa
Gene Summary:	Calcium channels mediate the entry of calcium ions into the cell upon membrane polarization. This gene encodes the alpha-2/delta subunit of the voltage-dependent calcium channel complex. The complex consists of the main channel-forming subunit alpha-1, and auxiliary subunits alpha-2/delta, beta, and gamma. The auxiliary subunits function in the assembly and membrane localization of the complex, and modulate calcium currents and channel activation/inactivation kinetics. The subunit encoded by this gene undergoes post-translational cleavage to yield the extracellular alpha2 peptide and a membrane-anchored delta polypeptide. This subunit is a receptor for the antiepileptic drug, gabapentin. Mutations in this gene are associated with early infantile epileptic encephalopathy. Single nucleotide polymorphisms in this gene are correlated with increased sensitivity to opioid drugs. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Mar 2014]

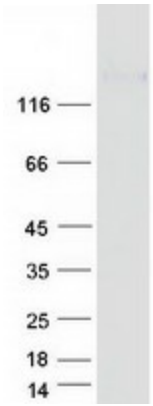
Product images:



Circular map for RC230662



Western blot validation of overexpression lysate (Cat# [LY433661]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC230662 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CACNA2D2 protein (Cat# [TP330662]). The protein was produced from HEK293T cells transfected with CACNA2D2 cDNA clone (Cat# RC230662) using MegaTran 2.0 (Cat# [TT210002]).