

Product datasheet for **RG219081**

CACNA2D1 (NM_000722) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CACNA2D1 (NM_000722) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CACNA2D1
Synonyms:	CACNA2; CACNL2A; CCHL2A; LINC01112; lncRNA-N3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG219081 representing NM_000722 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCTGCTGGCTGCCTGCTGGCCTTGACTCTGACACTTTTCCAATCTTTGCTCATCGGCCCTCGTCGG
AGGAGCCGTTCCCTTCGGCCGTCCTACTATCAAATCATGGGTGGATAAGATGCAAGAAGACCTTGTCACT
GGCAAAAACAGCAAGTGGAGTCAATCAGCTTGTGATTTATGAGAAATATCAAGATTTGTATACTGTG
GAACCAATAATGCACGCCAGCTGGTAGAAATTGCAGCCAGGGATATTGAGAACTTCTGAGCAACAGAT
CTAAAGCCCTGGTGGCCTGGCATTGGAAGCGGAGAAAGTTCAAGCAGCTCACCAGTGGAGAGAAGATTT
TGCAAGCAATGAAGTTGTCTACTACAATGCAAAGGATGATCTCGATCCTGAGAAAAATGACAGTGAGCCA
GGCAGCCAGAGGATAAAACCTGTTTTTCATTGAAGATGCTAATTTTGGACGACAAATATCTTATCAGCAGC
CAGCAGTCCATATTCCTACTGACATCTATGAGGGCTCAACAATTGTGTTAAATGAACTCAACTGGACAAG
TGCCTTAGATGAAGTTTTCAAAAAGAAATCGCGAGGAAGACCCCTCATTATTGTGGCAGGTTTTTGGCAGT
GCCACTGGCCTAGCTCGATATTATCCAGCTTACCATGGGTTGATAATAGTAGAACTCCAATAAGATTG
ACCTTTATGATGTACGCAGAAGACCATGGTACATCCAAGGAGCTGCATCTCCTAAAGACATGCTTATTCT
GGTGGATGTGAGTGAAGTGTAGTGGATTGACACTTAACTGATCCGAACATCTGTCTCCGAAATGTTA
GAAACCTCTCAGATGATGATTTTCGTGAATGTAGCTTCAATTAACAGCAATGCTCAGGATGTAAGCTGTT
TTCAGCACCTTGCCAAGCAAATGTAAGAAATAAAAAAGTGTGAAAGACGCGGTGAATAATATCACAGC
CAAAGGAATTACAGATTATAAGAAGGGCTTTAGTTTTGCTTTTGAACAGCTGCTTAATTATAATGTTTCC
AGAGCAAATGCAATAAGATTATTATGCTATTCACGGATGGAGGAGAAGAGAGAGCCAGGAGATATTTA
ACAAATACAATAAAGATAAAAAAGTACGTGATTACAGTTTTTCAGTTGGTCAACACAATTATGACAGAGG
ACCTATTCAGTGGATGGCCTGTGAAAACAAAGGTTATTATTATGAAATTCCTTCCATTGGTGCAATAAGA
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TCCAATGGACAAATGTGTACCTGGATGCATTGGAAGTGGACTTGTCTTACTGGAACCTTCCGGTCTT
CAACATAACCGCCAATTTGAAAATAAGACAAACTTAAAGAACCAGCTGATTCCTGGTGTGATGGGAGTA



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GATGTGTCTTTGGAAGATATTAAGAGCTGACACCACGTTTTACTGTGCCCAATGGGTATTACTTTG
 CAATCGATCCTAATGGTTATGTTTTATTACATCCAATCTTCAGCCAAAGAACCCCAATCTCAGGAGCC
 AGTAACATTGGATTTCTTGATGCAGAGTTAGAGAATGATATTAAGTGGAGATTCGAAATAAGATGATT
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 CGGTCCAATCCTTGTGACATGGTTAAGCAACCCAGATACCGAAAAGGGCCTGATGCTGCTTTGATAAC
 AATGTCTTGAGGATTATACTGACTGTGGTGGTGTCTGGATTAATCCCTCCCTGTGGTATATCATTG
 GAATCCAGTTTCTACTACTTTGGCTGGTATCTGGCAGCACACCCGCTGTTA

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence:

>RG219081 representing NM_000722

Red=Cloning site Green=Tags(s)

MAAGLLALTLFQSLIIGPSSEEPFSAVTIKSWDKMQEDLVTLAKTASGVNQLVDIYEKYQDLYTV
 EPNARQLVEIAARDIEKLLSNRSKALVRLALEAEKVQAAHQWREDFASNEVVVYNAKDDLDPKNDSEP
 GSQRIKPVFIEDANFGRQISYQHAAVHIPTDIYEGSTIVLNELNWTLSALDEVFKKREEDPSLLWQVFGS
 ATGLARYYPASPWDNSRTPNKIDLYDVRRRPWYIQGAASPKDMLILVDVSGSVSGLTLKLIRTSVSEML
 ETLSDDDFVNVASFNSAQDVSCFQHLVQANVRNKKVLDKAVNNITAKGITDYKKGFSFAFEQLLNYNVS
 RANCNKIIMLFTDGGEEAQQEIFNKYKDKKVRVFTFSVGQHNDRGPIQWMACENKGYEYIPIPSIGAIR
 INTQEYLDVLRPMVLADKAKQVQWNTNLYLDALELGLVITGTLPVFNITGQFENKTNLKNQLILGVMGV
 DVSLIEDIKRLTPRFTLCPNGYFPAIDPNGYVLLHPNLQPKNPKSQEPVTLDFLDAELENKVEIRNKMI
 DGESGEKTFRTLKVSQDERYIDKGNRTYTWPNVNGTDYSLALVLPYTSFYIYKAKLEETITQARSKKGM
 KDSETLKPDNFEESGYTFIAPRDYCNLDKISDNTEFLNFNEFIDRKTNNPNSCNADLINRVLLDAGFT
 NELVQNYWSKQKNIKGVKARFVVDGGITRVYPKEAGENWQENPETYEDSFYKRSLEDNDNYVFTAPYFNK
 SGPGAYESGIMVSKAVEIYIQGKLLKPAVVGKIDVNSWIENFTKTSIRDPCAGPVCDCKRNSDVMDCVI
 LDDGGFLLMANHDDYTNIQRGFGEIDPSLMRHLVNI SVYAFNKSYDYQSVCEPGAAPKQGAGHRSAYVP
 SVADILQIGWWATAAAWSILQQFLLSLTFPRLLLEAVEMEDDDFTASLSKQSCITEQTQYFFDNDKSFSG
 VLDGCGNSRIFHGEKLMNTNLIIFIMVESKGTCPDTRLLIQAEQTSAGPNPCDMVKQPRYRKGPDVCFDN
 NVLEDYDCCGGVSGLNPSLWYIIGIQFLLLWLVSSTHRL

TRTRPLE – GFP Tag – V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_000722

ORF Size: 3273 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 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).

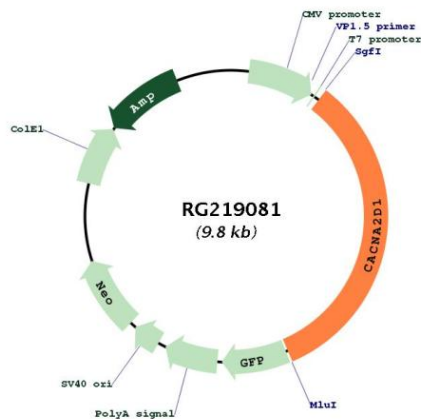
Reconstitution Method:

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: [NM_000722.4](#)
RefSeq Size: 3822 bp
RefSeq ORF: 3276 bp

Locus ID: 781
UniProt ID: [P54289](#)
Cytogenetics: 7q21.11
Domains: VWA, Cache
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
Gene Summary: The preproprotein encoded by this gene is cleaved into multiple chains that comprise the alpha-2 and delta subunits of the voltage-dependent calcium channel complex. Calcium channels mediate the influx of calcium ions into the cell upon membrane polarization. Mutations in this gene can cause cardiac deficiencies, including Brugada syndrome and short QT syndrome. Alternate splicing results in multiple transcript variants, some of which may lack the delta subunit portion. [provided by RefSeq, Nov 2014]

Product images:



Circular map for RG219081