

Product datasheet for **RG210702**

CACNA1G (NM_198382) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CACNA1G (NM_198382) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CACNA1G
Synonyms:	Ca(V)T.1; Cav3.1; NBR13; SCA42; SCA42ND
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG210702 representing NM_198382 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGACGAGGAGGAGGATGGAGCGGGCCGAGGAGTCGGGACAGCCCCGGAGCTTCATGCGGCTCAACG
ACCTGTGGGGCCGGGGCCGGCCGGGGCCGGGGTCCAGCAGAAAAGGACCCGGGCGAGCGCGACTCCGA
GGCGGAGGGGCTGCCGTACCCGGCGCTGGCCCCGGTGGTTTTCTCTACTTGAGCCAGGACAGCCGCCG
CGGAGCTGGTGTCTCCGACGGTCTGTAACCCCTGGTTTGAGCGCATCAGCATGTTGGTCATCCTTCTCA
ACTGCGTGACCCCTGGGCATGTTCCGGCCATGCGAGGACATCGCCTGTGACTCCCAGCGCTGCCGGATCCT
GCAGGCCCTTGTGACTTCATCTTTGCCTTCTTTGCCGTGGAGATGGTGGTGAAGATGGTGGCCTTGGGC
ATCTTTGGGAAAAAGTGTACCTGGGAGACACTTGAACCCGGCTTGAATTTTTCATCGTCATCGCAGGGA
TGCTGGAGTACTCGTGGACCTGCAGAACGTCAGCTTCTCAGCTGTCAGGACAGTCCGTGTGCTGCGACC
GCTCAGGGCCATTAACCGGGTGCCAGCATGCGCATCCTGTGACGTTGCTGGATACGCTGCCCATG
CTGGGCAACGTCCTGCTGCTCTGCTTCTTCGTCTTCTTCATCTTCGGCATCGTCGGCGTCCAGCTGTGGG
CAGGGCTGCTTCGGAACCGATGCTTCTACCTGAGAATTCAGCCTCCCCCTGAGCGTGGACCTGGAGCG
CTATTACCAGACAGAGAACGAGGATGAGAGCCCCCTTCACTGCTCCAGCCACGCGAGAACGGCATGCGG
TCCTGCAAGAGCGTGCCACGCTGCGCGGGACGGGGCGGTGGCCACCTTGGCTGACTATGAGG
CCTACAACAGCTCCAGCAACACCACCTGTGTCACTGGAACCACTACTACCAACTGCTCAGCGGGGA
GCACAACCCCTTCAAGGGCGCCATCAACTTTGACAACATTGGCTATGCCTGGATCGCCATCTTCCAGGTC
ATCAGCTGGAGGGCTGGGTCGACATCATGTAATTTGTGATGGATGCTCATTCTTCTACAATTTTCATCT
ACTTCATCCTCCTCATCATCGTGGGCTCCTTCTTCATGATCAACCTGTGCTGGTGGTATTGCCACGCA
GTTCTCAGAGACCAAGCAGCGGAAAGCCAGCTGATGCGGGAGCAGCGTGTGCGGTTCTGTCCAACGCC
AGCACCCTGGCTAGCTTCTGTAGCCCGGACGCTGCTATGAGGAGCTGCTCAAGTACCTGGTGTACATCC
TTCGTAAGGCAGCCCGCAGGCTGGCTCAGGTCTCTCGGGCAGCAGGTGTGCGGGTGGGCTGCTCAGCAG
CCCAGCACCCCTCGGGGCCAGGAGACCAGCCAGCAGCAGCTGCTCTGCTCCACCGCCGCTATCC



[View online >](#)

GTCCACCACCTGGTGCACCACCACCACCACCATCACCACCACTACCACCTGGGCAATGGGACGCTCAGGG
 CCCCCGGGCCAGCCCGGAGATCCAGGACAGGGATGCCAATGGGTCCCAGGCTCATGCTGCCACCACC
 CTCGACGCTGCCCTCTCCGGGGCCCCCTGGTGGCGCAGAGTCTGTGCACAGCTTCTACCATGCCGAC
 TGCCACTTAGAGCCAGTCCGCTGCCAGGCGCCCCCTCCAGGTCCCCATCTGAGGCATCCGGCAGGACTG
 TGGGCAGCGGGAAGGTGTATCCCACCGTGCACACCAGCCCTCCACCGGAGACGCTGAAGGAGAAGGCACT
 AGTAGAGTGGCTGCCAGCTCTGGGCCCAACCCTCACCAGCTCAACATCCCACCCGGGCCCTACAGC
 TCCATGGACAAGCTGCTGGAGACACAGAGTACAGGTGCCTGCCAAAGCTTTGCAAGATCTCCAGCCCTT
 GCTTGAAAGCAGACAGTGGAGCCTGTGGTCCAGACAGCTGCCCTACTGTGCCCGGGCCGGGCAGGGGA
 GGTGGAGCTCGCCGACCTGAAATGCCTGACTCAGACAGCGAGGCAAGTTATGAGTTCACACAGGATGCC
 CAGCACAGCGACCTCCGGGACCCCCACAGCCGGCGGCAACGGAGCCTGGGCCAGATGCAGAGCCAGCT
 CTGTGCTGGCCTTCTGGAGGTAATCTGTGACACCTTCCGAAAGATTGTGGACAGCAAGTACTTTGGCCG
 GGGAAATCATGATCGCCATCCTGGTCAACACACTCAGCATGGGCATCGAATACCACGAGCAGCCCGAGGAG
 CTTACCAACGCCCTAGAAATCAGCAACATCGTCTTACCAGCCTCTTGGCCCTGGAGATGCTGCTGAAGC
 TGCTTGTGTATGGTCCCTTTGGTACATCAAGAATCCCTACAACATCTTCGATGGTGTATTGTGGTGT
 CAGCGTGTGGGAGATCGTGGGCCAGCAGGGGGCGGCCTGTCCGTGCTGCGGACCTTCCGCTGATGCGT
 GTGCTGAAGCTGGTGCCTTCTGCCGGCGCTGCAGCGGAGCTGGTGGTGTCTATGAAGACCATGGACA
 ACGTGGCCACCTTCTGCATGCTGCTTATGCTCTTCATCTTCATCTTACAGCATCTGGGCATGCATCTCTT
 CGGCTGCAAGTTTGCCTCTGAGCGGGATGGGGACACCCTGCCAGACCGGAAGAAATTTGACTCCTTGCTC
 TGGGCCATCGTCACTGTCTTTCAGATCTGACCCAGGAGGACTGGAACAAAGTCTCTACAATGGTATGG
 CCTCCACGTGCTCCTGGGCGGCCCTTATTTTATTGCCCTCATGACCTTCGGCAACTACGTGCTCTTCAA
 TTTGCTGGTCGCCATTCTGGTGGAGGGCTCCAGGCGGAGGGAGATGCCAACAAGTCCGAATCAGAGCCC
 GATTTCTTCTACCCAGCCTGGATGGTGTGGGACAGGAAGAAGTGTGGCCTTGGTGTCCCTGGGAG
 AGCAACCGGAGCTGCGGAAGAGCCTGCTGCCCTCTCATCATCCACAGCGCCACACCCATGTCGCT
 GCCAAGAGCACACAGCAGGGCCCTGGGCGAGGCGCTGGGCCCTGCGTCCGCGCCGACACAGCAGCGGGG
 TCGGCAGAGCCTGGGGCGGCCACGAGATGAAGTACCAGCCAGCGCCCGAGCTCTCCGCACAGCCCT
 GGAGCGTGAAGCAGCTGGACCAGCAGGCGCTCCAGCCGGAACAGCCTCGGCCGTGCACCCAGCCTGAA
 GCGGAGAAGCCCAAGTGGAGAGCGGCGGTCCCTGTTGTGGGAGAAGGCCAGGAGAGCCAGGATGAAGAG
 GAGAGCTCAGAAGAGGAGCGGGCCAGCCCTGCGGGCAGTGACCATCGCCACAGGGGGTCCCTGGAGCGG
 AGGCCAAGAGTTCCTTTGACCTGCCAGACACACTGCAGGTGCCAGGGCTGCATCGCACTGCCAGTGGCCG
 AGGCTCTGCTTCTGAGCACCAGGACTGCAATGGCAAGTCCGCTTACGGGCGCTGGCCCGGGCCCTGCGG
 CCTGATGACCCCCACTGGATGGGATGACGCCGATGACGAGGGCAACCTGAGCAAGGGGAACGGGTCC
 GCGCGTGGATCCGAGCCGACTCCCTGCCTGCTGCCTCGAGCGAGACTCCTGGTCAAGCCTACATCTCCC
 TCCTCAGTCCAGGTTCCGCTCCTGTGTACCCGATCATCACCCACAAGATGTTCCGACCAGTGGTCCCT
 GTCATCATCTTCTTAAGTGCATCACCATCGCCATGGAGCGCCCCAAAATTGACCCACAGCGTGAAC
 GCATCTTCTGACCTCTCCAATTACATCTTACCAGCAGTCTTTCTGGCTGAAATGACAGTGAAGGTGGT
 GGCAGTGGGCTGGTGTTCGGGGAGCAGGCGTACCTGCGGAGCAGTTGGAACGTGCTGGACGGGCTGTTG
 GTGCTCATCTCCGTCATCGAATTTCTGGTGTCCATGGTCTTGCAGCGGCACCAAGATCCTGGGCATGC
 TGAGGGTGTGCGGCTGCTGCGGACCCTGCGCCGCTCAGGGTGTATCAGCCGGGCGCAGGGGCTGAAGCT
 GGTGGTGGAGACGCTGATGTCCTCACTGAAACCCATCGGCAACATTGTAGTATCTGCTGTGCCTTCTTC
 ATCATTTTCGGCATCTTGGGGTGCAGCTCTTCAAAGGGAAGTTTTTCGTGTGCCAGGGCGAGGATACCA
 GGAACATCACCATAAATCGGACTGTGCCGAGGCGAGTTACCGGTGGGTCCGGCACAAGTACAACCTTGA
 CAACCTTGGCCAGGCCCTGATGTCCCTGTTGTTTTGGCCTCAAAGGATGGTTGGGTGGACATCATGTAC
 GATGGGCTGGATGCTGTGGGCGTGGACCAGCAGCCATCATGAACCACAACCCCTGGATGCTGCTGACT
 TCATCTCGTTCTGCTCATTGTGGCCTTCTTGTCTGAACATGTTTGTGGGTGTGGTGGTGGAGAACTT
 CCACAAGTGTCCGAGCACCAGGAGGAAGAGGAGGCCCGCGGGGAGGAGAAGCGCTACGAAGACTG
 GAGAAAAAGAGAAGGAATCTAATGCTGGACGATGTAATTGCTTCCGGCAGCTCAGCCAGCGCTGCGTCAG
 AAGCCCAGTGCAAACCTTACTACTCCGACTACTCCGCTTCCGGCTCCTCGTCCACCACTTGTGCACCAG
 CCACTACCTGGACCTCTTCATCAGAGGTGCATCGGGCTGAACGTGGTACCATGGCCATGGAGCACTAC
 CAGCAGCCCCAGATTCTGGATGAGGCTCTGAAGATCTGCAACTACATCTTCACTGTCATCTTTGCTTGG
 AGTCAGTTTTCAAACCTTGTGGCCTTTGGTTTTCCGTCCGTTCTTCCAGGACAGGTGGAACCAAGCTGGACCT
 GGCCATTTGTGCTGCTGTCCATCATGGGCATCACGCTGGAGGAAATCGAGGTCAACGCCTCGCTGCCCATC
 AACCCACCATCATCCGCATCATGAGGGTGTGCGCATTGCCCGAGTGTGAAGCTGCTGAAGATGGCTG

TGGGCATGCGGGCGCTGCTGGACACGGTATGCAGGCCCTGCCCCAGGTGGGGAACCTGGGACTTCTCTT
CATGTTGTTGTTTTTCATCTTTGCAGCTCTGGGCGTGGAGCTCTTTGGAGACCTGGAGTGTGACGAGACA
CACCCCTGTGAGGGCCTGGGCCGTATGCCACCTTTGGAACTTTGGCATGGCCTTCTAACCCCTTTCC
GAGTCTCCACAGGTGACAATTGGAATGGCATTATGAAGGACACCCTCCGGGACTGTGACCAGGAGTCCAC
CTGCTACAACACGGTCATCTCGCTATCTACTTTGTGTCTTCGTGCTGACGGCCAGTTCTGTCTAGTC
AACGTGGTGATCGCCGTGCTGATGAAGCACCTGGAGGAGAGCAACAAGGAGGCCAAGGAGGAGCCGAGC
TAGAGGCTGAGCTGGAGCTGGAGATGAAGACCTCAGCCCCAGCCCCACTCGCCACTGGGCAGCCCTT
CCTCTGGCCTGGGTCGAGGGCCCCGACAGCCCCGACAGCCCCAAGCCTGGGGCTCTGCACCCAGCGGCC
CACGCGAGATCAGCCTCCCACTTTTCCCTGGAGACCCCCACGATGCAGCCCCACCCACGGAGCTGCCAG
GACCAGACTTACTGACTGTGCGGAAGTCTGGGGTCAAGGCAACGCACTCTCTGCCAATGACAGCTACAT
GTGTCGGCATGGGAGCACTGCCAGGGGCCCTGGGACACAGGGGCTGGGGGCTCCCCAAAGCTCAGTCA
GGCTCCGTCTTGTCCGTTCACTCCAGCCAGCAGATACCAGCTACATCCTGCAGTTCCCAAAGATGCAC
CTCATCTGCTCCAGCCCCACAGCGCCCCAACCTGGGGCACCATCCCCAACTGCCCCACCAGGACGCTC
CCCTTTGGCTCAGAGGCCACTCAGGCGCCAGGCAGCAATAAGGACTGACTCCTTGGACGTTCAAGGCTCTG
GGCAGCCGGGAAGACCTGCTGGCAGAGGTGAGTGGGCCCTCCCCGCCCTGGCCCGGGCCTACTCTTCT
GGGGCCAGTCAAGTACCCAGGCACAGCAGCACTCCCGCAGCCACAGCAAGATCTCCAAGCACATGACCCC
GCCAGCCCTTGGCCAGGCCAGAACCCAACTGGGGCAAGGGCCCTCCAGAGACCAGAAGCAGCTTAGAG
TTGGACACGGAGCTGAGCTGGATTTTCAGGAGACCTCCTGCCCCCTGGCGCCAGGAGGAGCCCCATCCC
CACGGGACCTGAAGAAGTGTACAGCGTGGAGGCCAGAGCTGCCAGCGCCGGCTACGTCTGGCTGGA
TGAGCAGAGGAGACTCTATCGCCGTGAGTGCCTGGACAGCGGCTCCCAACCCACCTGGGCACAGAC
CCCTCTAACCTTGGGGGCCAGCCTCTTGGGGGGCCTGGGAGCCGGCCCAAGAAAAAATCAGCCCGCCTA
GTATACCATAGACCCCCGAGAGCCAAGGTCTCGGACCCCGCCAGCCCTGGTATCTGCCTCCGGAG
GAGGGCTCCGTCCAGCGACTCCAAGGATCCCTTGGCCTCTGGCCCCCTGACAGCATGGCTGCCTCGCCC
TCCCCAAGAAAGATGTGCTGAGTCTCTCCGGTTATCCTCTGACCCAGCAGACCTGGACCCC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG210702 representing NM_198382
 Red=Cloning site Green=Tags(s)

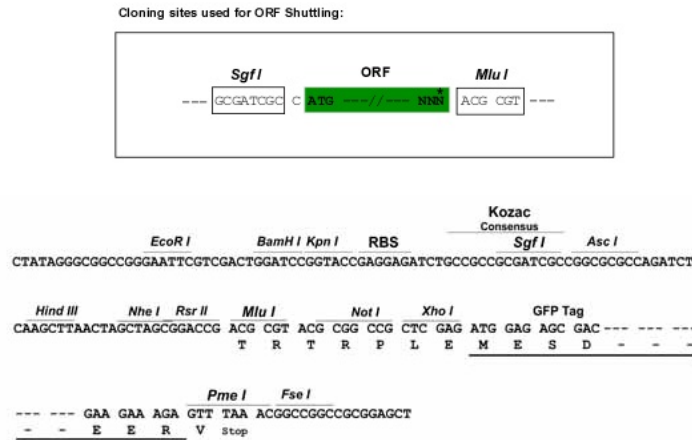
```

MDEEDGAGAEESGQPRSFMRNLNLSGAGGRPGPGSAEKDPGSADSEAEGLPYPALAPVVFYLSQDSRP
RSWCLRTVCNPWFERISMLVILLNCVTLMGFRPCEDIACDSQRCRILQAFDDFIFAFFAVEMVVKMVALG
IFGKKCYLGDTWNRLDFFIVIAGMLEYSLDLQNVSFSAVRTVRVLRPLRAINRVPSMRILVTLLEDLTPM
LGNVLLLCFFVFFIFGI VGVQLWAGLLRNRCFLPENFSLPLSVDLERYYTENEDESPFICSQPRENGMR
SCRSVPTLRGDGGGPPCGLDYEAYNSSNTTCVNNWQYYTNC SAGEHNPFGAINFDNIYAWIAIFQV
ITLEGWVDIMYFVMDAHSFYNFYIFILLIIVGSFFMINLCLVVIATQFSETKQRESQLMREQRVRFLSNA
STLASFSEPGSCYEELLYLVYILRKAARRLAQVSRAGVRVGLLSSPAPLGGQETQPSSSCSRSHRRLS
VHHLVHHHHHHHHYHLGNGTLRAPRASPEIQDRDANGSRRLMLPPPSTPALSGAPPGGAESVHSFYHAD
CHLEPVRCAQAPPRSPSEASGRTVGSGKVVYPTVHTSPPPETLKEKALVEVAASSGPPTL TSLNIPPGPYS
SMHKLLETQSTGACQSSCKISSPCLKADSGACGPDSCPYCARAGAGEVELADREMPDSDSEAVYEFQDA
QHSDLRDPHSRRQRSLGPAEPSSVLAFWRLICDTRFKIVDSKYFGRGIMIAILVNTLSMGIEYHEQPEE
LTNALEISNIVFTSLFALEMLLKL VYGPFYIKNPYINIFDGVIVVISVWEIVGQGGGLSVLRTFRMLR
VLKLVRFLPALQRQLVVLMTMDNVATFCMLLMLFIFIFISILGMHLFGCKFASERDGDTL PDRKNFDSLL
WAVTVVFQILTQEDWNKVL YNGMASTSSWAALYFIALMTFGNYVLFNLLVAILVEGFQAEGDANKSESEP
DFFSPSLDGDGDRKKCLALVSLGEHPELRKSLLPPLIIHTAATPMSLPKSTSTGLGEALGPASRRTSSSG
SAEPGAAHEMKSPPSARSSPHSPWSAASWTSRRSSRNSLGRAPSLKRRSPSGERRSLLSGEGQESQDEE
ESSEEEERASPAGSDHRRHRSGLEREAKSSFDPDTLQVPLHRTASGRGSAEHQDCNGKSASGRLARALR
PDDPPLDGDADDEGNLSKGERVRAWIRARLPACCLERDSWSAYIFPPQSRFRLCHR II THKMFDHVVL
VIFLNCITIAMERPKIDPHSAERIFLTL SNYIFTAVFLAEMTVKVVVALGWC FGEQAYLRSSWNVLDGLL
VLSVIDILVSMVSDSGTKILGMLRVLRLR LRTLRLRPLRVI SRAQGLKLVETLMSSLKPIGNIVVICAFF
IIFGILGVQLFKGKFFVCQGEDTRNITNKSDCAEASYRWRHKYNFDNLGQALMSL FVLASKDGWVDIMY
DGLDAVGVDQQPMNHNPMWMLLYFISFLLI VAFFVLNMFVGVVVVENFHKCRQH QEEEEARRREEKRLRRL
EKKRRNLMLDDV IASGSSASAASEAQCKPYSDYSRFRLLVHHLCTSHYLDL FITGVI GLNVVTMAMEHY
QQPQILDEALKICNYIFTVIFVLESVFKL VAFGFRRFFQDRWNQLDLAIVLLSIMGITLEEIEVNASLPI
NPTIIRIMRVLRIARVLKLLKMAVGMRALLDTVMQALPQVGNLGLL FMLFFIFAALGVELFGDLECDT
HPCEGLGRHATFRNFGMAFLTLFRVSTGDNWNGIMKDTLRDCDQESTCYNTVISPIYFVSFVLT AQFVLV
NVVIAVLMKHLEESNKEAKEEAELEAELEEMKTLSPQPHSPLGSPFLWPGVEGPDSPD SPKPGALHPAA
HARSASHFSLEHPTMQPHPTELPGPDLLTVRKS GVSRT HSLPNDSYMCRHGSTAEGLGHRGWGLPKAQS
GSVLSVHSQPADTSYILQLPKDAPHL LQPHSAPTWGTIPKLPPGGRSPLAQRPLRRQAAIRTD SLDVQGL
GSREDLLAEVSGPSPPLARAYSFWGQSSTQAQQHSRSHSKISKHMTTPAPCPGPEPNWKGPPETRSLE
LDELTELSWISGDLPPGGQEPPSPRDLK KYSVEAQSCQRRPTSWLDEQRRHSIAVSCLD SSGSQPHLGTD
PSNLGGQPLGGPGSRPKKLSPPSITIDPPESQGPRTPPSPGICLRRRAPSSDSK DPLASGPPD SMAASP
SPKDVDLSLSGLSSDPADLDP
  
```

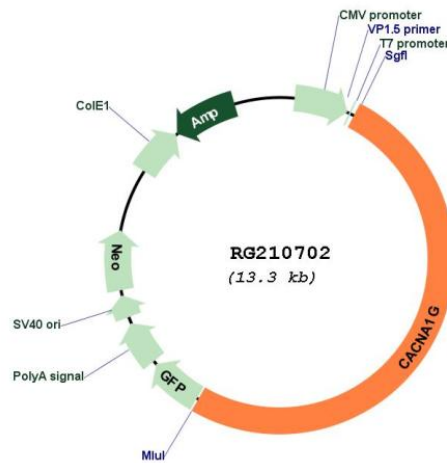
TRTRPLE - GFP Tag - V

Restriction Sites: Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_198382

ORF Size: 6783 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_198382.1 , NP_938196.1
RefSeq Size:	7477 bp
RefSeq ORF:	6786 bp
Locus ID:	8913
UniProt ID:	O43497
Cytogenetics:	17q21.33
Protein Families:	Druggable Genome, Ion Channels: Calcium, Transmembrane
Protein Pathways:	Calcium signaling pathway, MAPK signaling pathway, Type II diabetes mellitus
Gene Summary:	Voltage-sensitive calcium channels mediate the entry of calcium ions into excitable cells, and are also involved in a variety of calcium-dependent processes, including muscle contraction, hormone or neurotransmitter release, gene expression, cell motility, cell division, and cell death. This gene encodes a T-type, low-voltage activated calcium channel. The T-type channels generate currents that are both transient, owing to fast inactivation, and tiny, owing to small conductance. T-type channels are thought to be involved in pacemaker activity, low-threshold calcium spikes, neuronal oscillations and resonance, and rebound burst firing. Many alternatively spliced transcript variants encoding different isoforms have been described for this gene. [provided by RefSeq, Sep 2011]