

## Product datasheet for **MG226770**

### Cacna1c (NM\_009781) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cacna1c (NM_009781) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Cacna1c
Synonyms:	Cav1.2; Cchl1a1; D930026N18Rik; MBC; MELC-CC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG226770 representing NM_009781 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGATTCGGGCCTTTGTTTCAGCCATCCACACCCCCATACCAGCCACTCTCCAGTCACTCGTCTGAGGAAA  
CAGAGAGGAAGTTCAAGGGCAAGGTGGTACATGAAGCTCAACTCAACTGTTTCTACATTTCTCCTGGAGG  
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AACCTATCCGGAGGGCGTGCATAAGCATTGTTGAATGAAACCATTTGAAATCATTATTTACTGACTA  
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CCTCGAAACATGAGCATGCCACAAGTGAGACTGAGTCTGTCAACACTGAAAACGTGGCTGGAGGTGACA  
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ACGCGTACGCGGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >MG226770 representing NM\_009781  
 Red=Cloning site Green=Tags(s)

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 LQAGLRTLHDIGPEIRRAISGDLTAEELDKAMKEAVSAASEDDIFRRAGGLFGNHVTTYQSDSRGNFPQ  
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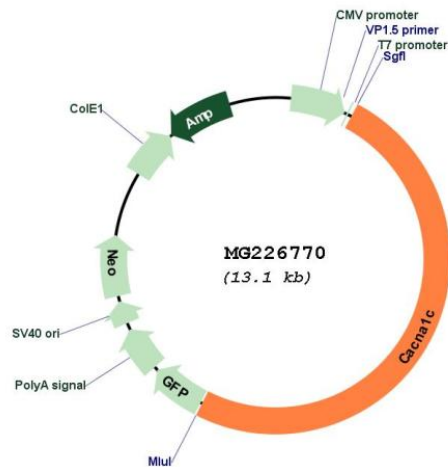
TRTRPLE - GFP Tag - V

**Restriction Sites:** Sgfl-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM\_009781

ORF Size: 6507 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\\_009781.4](#), [NP\\_033911.2](#)

**RefSeq Size:** 8301 bp

**RefSeq ORF:** 6510 bp

**Locus ID:** 12288

**Cytogenetics:** 6 55.86 cM

**Gene Summary:** Pore-forming, alpha-1C subunit of the voltage-gated calcium channel that gives rise to L-type calcium currents (PubMed:14609949, PubMed:18586882, PubMed:21216955, PubMed:25368181, PubMed:28119464). Mediates influx of calcium ions into the cytoplasm, and thereby triggers calcium release from the sarcoplasm (By similarity). Plays an important role in excitation-contraction coupling in the heart. Required for normal heart development and normal regulation of heart rhythm (PubMed:21216955). Required for normal contraction of smooth muscle cells in blood vessels and in the intestine. Essential for normal blood pressure regulation via its role in the contraction of arterial smooth muscle cells (PubMed:14609949, PubMed:28119464). Long-lasting (L-type) calcium channels belong to the 'high-voltage activated' (HVA) group (Probable).[UniProtKB/Swiss-Prot Function]