

## Product datasheet for **SC118102**

### Troponin C1 (TNNC1) (NM\_003280) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Troponin C1 (TNNC1) (NM_003280) Human Untagged Clone
Tag:	Tag Free
Symbol:	Troponin C1
Synonyms:	CMD1Z; CMH13; TN-C; TNC; TNNC
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene ORF sequence for NM\_003280 edited  
ATGGATGACATCTACAAGGCTGCGGTAGAGCAGCTGACAGAAGAGCAGAAAAATGAGTTC  
AAGGCAGCCTTCGACATCTTCGTGCTGGGCGCTGAGGATGGCTGCATCAGCACCAAGGAG  
CTGGGCAAGGTGATGAGGATGCTGGGCCAGAACCCACCCCTGAGGAGCTGCAGGAGATG  
ATCGATGAGGTGGACGAGGACGGCAGCGCACGGTGGACTTTGATGAGTTCCTGGTCATG  
ATGGTTCGGTGCATGAAGGACGACAGCAAAGGAAATCTGAGGAGGAGCTGTCTGACCTC  
TTCCGCATGTTTGACAAAAATGCTGATGGCTACATCGACCTGGATGAGCTGAAGATAATG  
CTGCAGGCTACAGGCGAGACCATCACGGAGGACGACATCGAGGAGCTCATGAAGGACGGA  
GACAAGAACAACGACGGCCGCATCGACTATGATGAGTTCCTGGAGTTCATGAAGGGTGTG  
GAGTAG



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**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_003280 unedited  
 ACGGTTCACTATTTTGTAAACGACTCACTATAGGGCGGCCGCGAAATTCGCACGAGGGT  
 GAGCCGCCAGCATGGATGACATCTACAAGGCTGCGGTAGAGCAGCTGACAGAAGAGCAGA  
 AAAATGAGTTCAAGGCAGCCTTCGACATCTTCGTGCTGGGCGCTGAGGATGGCTGCATCA  
 GCACCAAGGAGCTGGCAAGGTGATGAGGATGCTGGGCCAGAACCCACCCTGAGGAGC  
 TGCAGGAGATGATCGATGAGTGGACGAGGACGGCAGCGGCACGGTGGACTTTGATGAGT  
 TCCTGGTCATGATGGTTCGGTGCATGAAGGACGACAGCAAGGGAAATCTGAGGAGGAGC  
 TGCTGACCTCTCCGCATGTTTGACAAAAATGCTGATGGCTACATCGACCTGGATGAGC  
 TGAAGATAATGCTGCAGGCTACAGGCGAGACCATCACGGAGGACGACATCGAGGAGCTCA  
 TGAAGGACGGAGACAAGAACAACGACGGCCGCATCGACTATGATGAGTTCCTGGAGTTCA  
 TGAAGGGTGTGGAGTAGATGCTGACCTTACCCAGAGCTGCCTATGCCAGCCTCCAAC  
 CCAGCTGAGTCTGGGTGGGGGAGGGNNNNNNNCCNCTCTCCACCTCTCTCCC  
 TATCNCCTCCCCTACTTCCCCTCTTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCT  
 TAAAAAACAAAAACCTAATCCCACCTTCTACACCTAAATTATTTCAAACAACATCAT  
 TAACTCACTTTTATCCACACTACTCTCCTATCCTCTCTTACCCCTACTCCCTATCTCCC  
 TTTCAATCCACCTTATTATTTCTTATTTCTCTCTCTAATCACATTACAATAATCTCT  
 CTACTATTCCACTAACTC

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_003280 unedited  
 CCGTTTGGGGCTTTTTTGCATCTCCCGACGCATCGGGCGGGAGTCGGGGGATTTGGG  
 GTTGAGGACATGGCCAGGCTCAGGTCTGGGACCCGACCCCTCCCAACCCAGGACT  
 CAGCTGGAGTTGGAGGCTGGGCATAGGCAGCTCTGGGTGAAGTCAAGTCACTACTCCACA  
 CCCTTCATGAACTCCAGGAACTCATCATAGTCGATGCGGCCGTCGTTGTTCTTGTCTCCG  
 TCCTTCATGAGCTCCTCGATGTCGTCTCCGTGATGGTCTCGCCTGTAGCCTGCAGCATT  
 ATCTTCAGCTCATCCAGGTGATGATAGCCATCAGCATTGTTGTCAAACATGCGGAAGAGG  
 TCACACAGCTCCTCCTCAGATTTCCCTTGTGTCGTCTTCATGCACCGAACCATCATG  
 ACCAGGAACTCATCAAAGTCCACCGTCCCGCTGCCGTCTCGTCCACCTCATCGATCATC  
 TCCTGCAGCTCCTCAGGGTGGGGCTCTGCCCCACCATCTCATACCTTGCCCAGCTCC  
 TTGGTGTGATGCACCCATCCTCACCGCCAGCACCAACATGCCAACCGTGCCTTGAAC  
 TCATTGTCTCTGCGTTGTGCCAGCTGCTCTACCGCAACCTGGACATGCCATGGATGCTC  
 GCTGGGTCAACCCTGGTGCCTCCATCCGCGCCGCTTATAGTGCAGCGCCCTCACAAAAAT  
 TGCCGCCGCCACTAAACCGGCCCGGGTTATCTAGACCTCCCCCGGGCCAGCTACC  
 GCCCATTCGCGCAACGGGCCGGCGGTCTTACCCCTTGCGAACGTGCGCTGCTACTCC  
 CCCCACACAGACCGGTTGGCCGCTGCCGCCACCTTCCCAACCGGTGGGCATACCG  
 TCTCTCCCCATGATCCATT

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_003280

**Insert Size:**

820 bp

**OTI Disclaimer:**

Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

**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\\_003280.1](#), [NP\\_003271.1](#)

**RefSeq Size:** 686 bp

**RefSeq ORF:** 486 bp

**Locus ID:** 7134

**UniProt ID:** [P63316](#)

**Cytogenetics:** 3p21.1

**Domains:** EFh

**Protein Pathways:** Calcium signaling pathway, Cardiac muscle contraction, Dilated cardiomyopathy, Hypertrophic cardiomyopathy (HCM)

**Gene Summary:** Troponin is a central regulatory protein of striated muscle contraction, and together with tropomyosin, is located on the actin filament. Troponin consists of 3 subunits: TnI, which is the inhibitor of actomyosin ATPase; TnT, which contains the binding site for tropomyosin; and TnC, the protein encoded by this gene. The binding of calcium to TnC abolishes the inhibitory action of TnI, thus allowing the interaction of actin with myosin, the hydrolysis of ATP, and the generation of tension. Mutations in this gene are associated with cardiomyopathy dilated type 1Z. [provided by RefSeq, Oct 2008]