

Product datasheet for **RC207014**

Troponin C1 (TNNC1) (NM_003280) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Troponin C1 (TNNC1) (NM_003280) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: Troponin C1
Synonyms: CMD1Z; CMH13; TN-C; TNC; TNNC
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC207014 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGATGACATCTACAAGGCTGCGGTAGAGCAGCTGACAGAAGAGCAGAAAAATGAGTTCAAGGCAGCCT
TCGACATCTTCGTGCTGGGCGCTGAGGATGGCTGCATCAGCACCAAGGAGCTGGGCAAGGTGATGAGGAT
GCTGGGCCAGAACCCACCCTGAGGAGCTGCAGGAGATGATCGATGAGGTGGACGAGGACGGCAGCGGC
ACGGTGGACTTTGATGAGTTCCTGGTCATGATGGTTCGGTGCATGAAGGACGACAGCAAAGGAAATCTG
AGGAGGAGCTGTCTGACCTCTCCGCATGTTTGACAAAAATGCTGATGGCTACATCGACCTGGATGAGCT
GAAGATAATGCTGCAGGCTACAGGCGAGACCATCACGGAGGACGACATCGAGGAGCTCATGAAGGACGGA
GACAAGAACAACGACGGCCGCATCGACTATGATGAGTTCCTGGAGTTCATGAAGGGTGTGGAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC207014 protein sequence
Red=Cloning site Green=Tags(s)

MDDIYKAAVEQLTEEQNEFKAAFDIFVLGAEDGCISTKELGKVMRMLGQNPTPEELQEMIDEVDEDGSG
TVDFDEFVMMVRCMKDDSKGKSEEELSDLFRMFDKNADGYIDLDELKIMLQATGETITEDDIEELMKDG
DKNNDGRIDYDEFLEFMKGVE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6018_d05.zip



[View online >](#)

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_003280

ORF Size: 483 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_003280.3](#)

RefSeq Size: 705 bp

RefSeq ORF: 486 bp

Locus ID: 7134

UniProt ID: [P63316](#)

Cytogenetics: 3p21.1

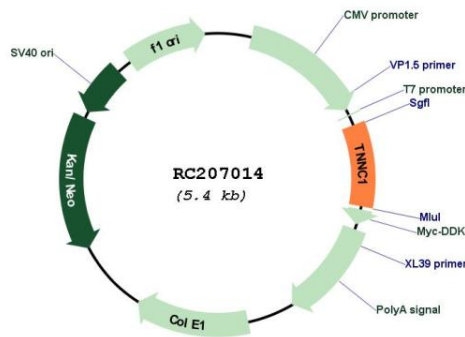
Domains: EFh

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

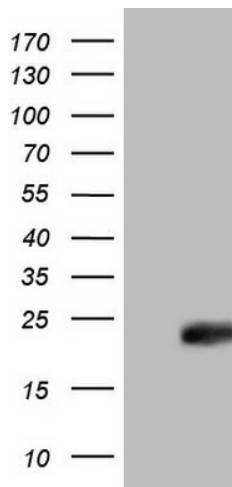
MW: 18.4 kDa

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]

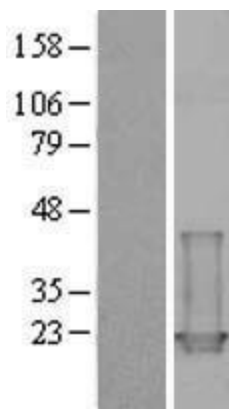
Product images:



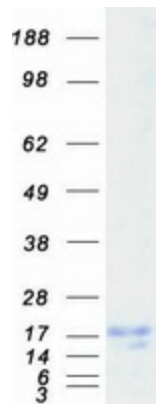
Circular map for RC207014



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY TNNC1 (Cat# RC207014, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-TNNC1 (Cat# [TA804479]). Positive lysates [LY401131] (100ug) and [LC401131] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401131]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207014 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified TNNC1 protein (Cat# [TP307014]). The protein was produced from HEK293T cells transfected with TNNC1 cDNA clone (Cat# RC207014) using MegaTran 2.0 (Cat# [TT210002]).