

## Product datasheet for RC214180

### Cardiac Troponin T (TNNT2) (NM\_000364) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Cardiac Troponin T (TNNT2) (NM_000364) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Cardiac Troponin T
Synonyms:	CMD1D; CMH2; CMPD2; cTnT; LVNC6; RCM3; TnTC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC214180 representing NM_000364 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGTCTGACATAGAAGAGGTGGTGAAGAGTACGAGGAGGAGGAGCAGGAAGAAGCAGCTGTTGAAGAAG  
AGGAGGACTGGAGAGAGGACGAAGACGAGCAGGAGGAGGCCAGCGGAAGAGGATGCTGAAGCAGAGGCTGA  
GACCGAGGAGACCAGGGCAGAAGAAGATGAAGAAGAAGAGGAAGCAAAGGAGGCTGAAGATGGCCCAATG  
GAGGAGTCCAAACCAAAGCCAGGTCGTTTCATGCCCAACTTGGTGCCTCCAAGATCCCCGATGGAGAGA  
GAGTGGACTTTGATGACATCCACCGGAAGCGCATGGAGAAGGACCTGAATGAGTTGCAGGCGCTGATTGA  
GGCTCACTTTGAGAACAGGAAGAAAGAGGAGGAGGAGCTCGTTTTCTCAAGACAGGATCGAGAGACGT  
CGGGCAGAGCGGGCCGAGCAGCAGCGCATCCGGAATGAGCGGGAGAAGGAGCGGCAGAACCCTGGCTG  
AAGAGAGGGCTCGACGAGAGGAGGAGGAGAACAGGAGGAAGGCTGAGGATGAGGCCCGGAAGAAGAAGGC  
TTTGTCCAACATGATGCATTTTGGGGTTACATCCAGAAGACAGAGCGGAAAAGTGGGAAGAGGCAGACT  
GAGCGGAAAAGAAGAAGAAGATTCTGGCTGAGAGGAGGAAGGTGCTGGCCATTGACCACCTGAATGAAG  
ATCAGCTGAGGGAGAAGGCCAAGGAGCTGTGGCAGAGCATCTATAACTTGGAGGCAGAGAAGTTCGACCT  
GCAGGAGAAGTTCAAGCAGCAGAAATATGAGATCAATGTTCTCCGAAACAGGATCAACGATAACCCAGAAA  
GTCTCCAAGACCCGCGGAAGGCTAAAGTCACCGGGCGCTGAAAA

**ACGCGT**ACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC214180 representing NM\_000364  
Red=Cloning site Green=Tags(s)

MSDIEEVVEEYEEEEQEEAAVEEEEDWREDEDEQEEAAEEDAEAEATEETEETRAEEDDEEEEAKEAEDGPM  
 EESKPKPRSFMPNLVPPKIPDGERVDFDDIHRKRMEKDLNELQALIEAHFENRKKEEELVSLKDRERR  
 RAERAEQQRIRNEREKERQNLAEERARREEENRRKAEDARKKKALSNMMHFGGYIQKTERKSGKRQT  
 EREKKKILAEARRKVLADHLDNEDQLREKAKELWQSIYNLEAEKFDLQEKFKQKYEINVLRNRINDNQK  
 VSKTRGKAKVTGRWK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mg4339\\_a02.zip](https://cdn.origene.com/chromatograms/mg4339_a02.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_000364

**ORF Size:** 885 bp

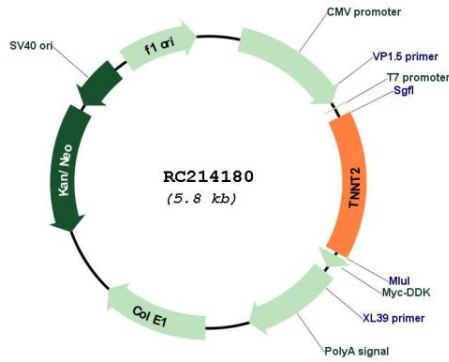
**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone 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.

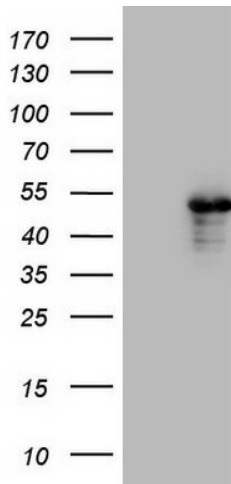
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_000364.4</a>
<b>RefSeq Size:</b>	1153 bp
<b>RefSeq ORF:</b>	888 bp
<b>Locus ID:</b>	7139
<b>UniProt ID:</b>	<a href="#">P45379</a>
<b>Cytogenetics:</b>	1q32.1
<b>Domains:</b>	Troponin
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Cardiac muscle contraction, Dilated cardiomyopathy, Hypertrophic cardiomyopathy (HCM)
<b>MW:</b>	35.4 kDa
<b>Gene Summary:</b>	<p>The protein encoded by this gene is the tropomyosin-binding subunit of the troponin complex, which is located on the thin filament of striated muscles and regulates muscle contraction in response to alterations in intracellular calcium ion concentration. Mutations in this gene have been associated with familial hypertrophic cardiomyopathy as well as with dilated cardiomyopathy. Transcripts for this gene undergo alternative splicing that results in many tissue-specific isoforms, however, the full-length nature of some of these variants has not yet been determined. [provided by RefSeq, Jul 2008]</p>

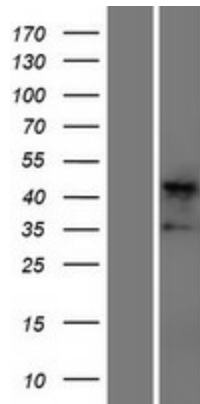
Product images:



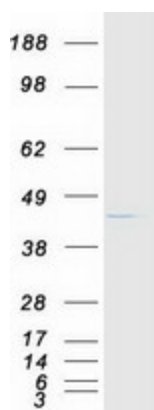
Circular map for RC214180



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY TNNT2 (Cat# RC214180, 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-TNNT2 (Cat# [TA804412]). Positive lysates [LY400130] (100ug) and [LC400130] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400130]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC214180 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified TNNT2 protein (Cat# [TP314180]). The protein was produced from HEK293T cells transfected with TNNT2 cDNA clone (Cat# RC214180) using MegaTran 2.0 (Cat# [TT210002]).