

## Product datasheet for **SC311460**

### TNNT3 (NM\_001042780) Human Untagged Clone

#### Product data:

|                           |  |
|---------------------------|--|
| Product Type:             | Expression Plasmids  |
| Product Name:             | TNNT3 (NM_001042780) Human Untagged Clone  |
| Tag:                      | Tag Free   |
| Symbol:                   | TNNT3  |
| Synonyms:                 | beta-TnTF; DA2B2; TNTF   |
| Mammalian Cell Selection: | Neomycin   |
| Vector:                   | pCMV6-Entry (PS100001)   |
| E. coli Selection:        | Kanamycin (25 ug/mL)   |
| Fully Sequenced ORF:      | >SC311460 representing NM_001042780.<br>Blue=Insert sequence Red=Cloning site Green=Tag(s) |

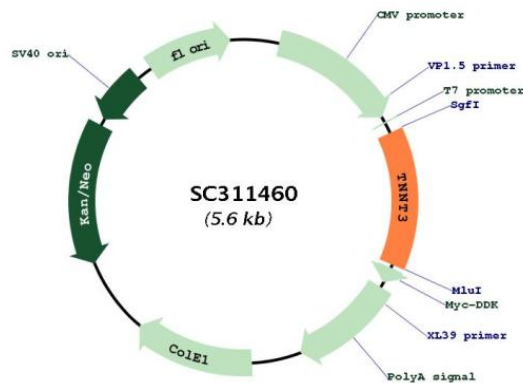
```
GCTCGTTT TAGTGAACCGTCAGAATTTTGT AATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTG
GATCCGGTACCGAGGAGATCTGCCGCC GCGATCGCC
ATGTCTGACGAGGAAGTTGAACAGGTGGAGGAGCAGTACGAAGAAGAAGAGGAAGCCAGGAGGAAGAG
GAAGTTCAAGAAGAGGAGAAACCGAGACCCAACTCACTGCTCCTAAGATCCCAGAAGGGGAGAAAGTG
GACTTCGATGACATCCAGAAGAAGCGTCAGAACAAGACCTAATGGAGCTCCAGGCCCTCATCGACAGC
CACTTTGAAGCCCGAAGAAGGAGGAGGAGGAGCTGGTCGCTCTCAAAGAGAGAATCGAGAAGCGCCGT
GCAGAGAGAGCGGAGCAGCAGAGGATTCGTGCAGAGAAGGAGAGGGAGCGCCAGAACAGACTGGCGGAG
GAAAAGGCCAGAAGGGAGGAGGAGATGCCAAGAGGGCAGAGGACGACCTGAAGAAGAAGAAAGCT
CTGTCTTCCATGGGAGCCAACTACAGCAGCTACCTGGCCAAGGCTGACCAGAAGAGAGGCAAGAAGCAG
ACAGCCCGGAAATGAAGAAGAAGATTCTGGCTGAGAGACGCAAGCCGCTCAACATCGATCACCTTGGT
GAAGACAACTGAGGGACAAGGCCAAGGAGCTCTGGGAGACCCTGCACCAGCTGGAGATTGACAAGTTC
GAGTTGGGGAGAAGCTGAAACGCCAGAAATATGACATCATGAATGTCCGGGCCAGAGTGCGATGCTG
GCCAAGTTCAGCAAGAAGGCTGGGACCCAGCCAAAGGCAAAAGTCGGCGGGCGCTGGAAGTAG
ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT
TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC
```

Restriction Sites: Sgfl-Mlul



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## Plasmid Map:



ACCN: NM\_001042780

Insert Size: 753 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).

**OTI Annotation:** This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

**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\\_001042780.2](#)

RefSeq Size: 1193 bp

RefSeq ORF: 753 bp

Locus ID: 7140

UniProt ID: [P45378](#)

Cytogenetics: 11p15.5

MW: 29.7 kDa

**Gene Summary:**

The binding of Ca(2+) to the trimeric troponin complex initiates the process of muscle contraction. Increased Ca(2+) concentrations produce a conformational change in the troponin complex that is transmitted to tropomyosin dimers situated along actin filaments. The altered conformation permits increased interaction between a myosin head and an actin filament which, ultimately, produces a muscle contraction. The troponin complex has protein subunits C, I, and T. Subunit C binds Ca(2+) and subunit I binds to actin and inhibits actin-myosin interaction. Subunit T binds the troponin complex to the tropomyosin complex and is also required for Ca(2+)-mediated activation of actomyosin ATPase activity. There are 3 different troponin T genes that encode tissue-specific isoforms of subunit T for fast skeletal-, slow skeletal-, and cardiac-muscle. This gene encodes fast skeletal troponin T protein; also known as troponin T type 3. Alternative splicing results in multiple transcript variants encoding additional distinct troponin T type 3 isoforms. A developmentally regulated switch between fetal/neonatal and adult troponin T type 3 isoforms occurs. Additional splice variants have been described but their biological validity has not been established. Mutations in this gene may cause distal arthrogryposis multiplex congenita type 2B (DA2B). [provided by RefSeq, Oct 2009]

Transcript Variant: This variant (3) lacks two internal coding exons and contains one different coding exon compared to transcript variant 1. However, it maintains the reading frame, and encodes a shorter isoform (3) with a different internal segment compared to isoform 1.