

Product datasheet for RC205676

Troponin I fast skeletal muscle (TNNI2) (NM_003282) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: Troponin I fast skeletal muscle (TNNI2) (NM_003282) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: Troponin I fast skeletal muscle
Synonyms: AMCD2B; DA2B; DA2B1; FSSV; fsTnI
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC205676 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCCCGCATCGCC

ATGGGAGATGAGGAGAAGCGGAACAGGGCCATCACGGCCCGCAGGCAGCACCTGAAGAGCGTGATGCTGC
 AGATAGCGGCCACGGAGCTGGAGAAGGAGGAGAGCCGCCGTGAGGCAGAGAAGCAGAAGCTACCTGGCGGA
 GCACTGCCCGCCGCTGCATATCCCGGGTCCATGTCTGAAGTGCAGGAGCTCTGCAAACAGCTGCACGCC
 AAGATCGATGCGGCTGAAGAGGAGAAGTACGACATGGAGGTGAGGGTGCAGAAGACCAGCAAGGAGCTGG
 AGGACATGAACCAGAAGCTATTTGATCTCGGGGCAAGTTCAAGCGGCCCCCACTGCGGAGGGTGCAT
 GTCGGCCGATGCCATGCTCAAGGCCCTGCTGGGCTCGAAGCACAAGGTGTGCATGGACCTGAGGGCCAAC
 CTGAAGCAGGTCAAGAAGGAGGACACAGAGAAGGAGCGGGACCTGCGAGACGTGGGTGACTGGAGGAAGA
 ACATCGAGGAGAAGTCTGGCATGGAGGGCCGGAAGAAGATGTTTGAGTCCGAGTCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC205676 protein sequence
 Red=Cloning site Green=Tags(s)

MGDEEKRNRAITARRQHLKSVMLQIAATELEKEESRREAQKQNYLAEHCPPLHIPGSMSEVQELCKQLHA
 KIDAAEEKYMVEVRVQKTSKELEDMNQKLFDLRGKFKRPPLRRVRMSADAMLKALLGSKHKVCMDLRAN
 LKQVKKEDTEKERDLRDVGDWRKNIIEKSGMEGRKKMFESES

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6066_f12.zip



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Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_003282

ORF Size: 546 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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

RefSeq: [NM_003282.1](#)

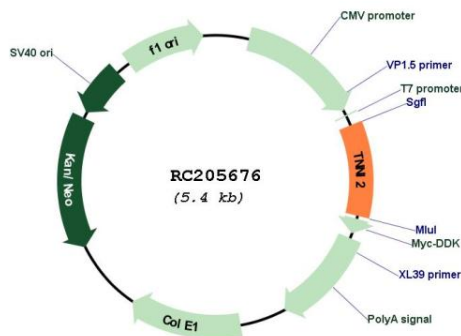
RefSeq Size: 738 bp

RefSeq ORF: 549 bp

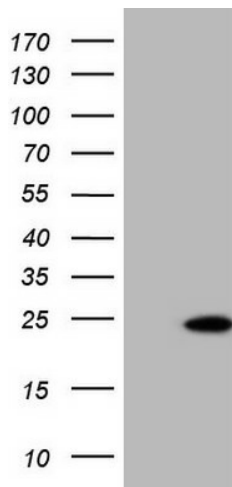
Locus ID: 7136
UniProt ID: [P48788](#)
Cytogenetics: 11p15.5
Domains: Troponin
MW: 21.3 kDa

Gene Summary: This gene encodes a fast-twitch skeletal muscle protein, a member of the troponin I gene family, and a component of the troponin complex including troponin T, troponin C and troponin I subunits. The troponin complex, along with tropomyosin, is responsible for the calcium-dependent regulation of striated muscle contraction. Mouse studies show that this component is also present in vascular smooth muscle and may play a role in regulation of smooth muscle function. In addition to muscle tissues, this protein is found in corneal epithelium, cartilage where it is an inhibitor of angiogenesis to inhibit tumor growth and metastasis, and mammary gland where it functions as a co-activator of estrogen receptor-related receptor alpha. This protein also suppresses tumor growth in human ovarian carcinoma. Mutations in this gene cause myopathy and distal arthrogryposis type 2B. Alternatively spliced transcript variants have been found for this gene. [provided by RefSeq, Mar 2009]

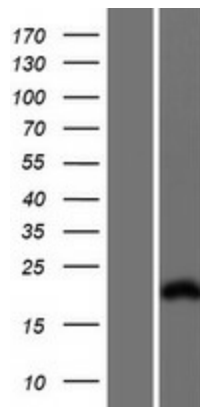
Product images:



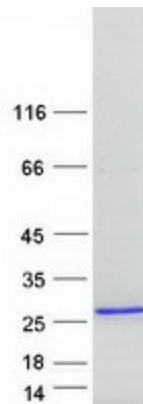
Circular map for RC205676



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY TNNI2 (Cat# RC205676, 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-TNNI2(Cat# [TA807853]). Positive lysates [LY418789] (100ug) and [LC418789] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY429025]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC227636] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified TNNI2 protein (Cat# [TP305676]). The protein was produced from HEK293T cells transfected with TNNI2 cDNA clone (Cat# RC205676) using MegaTran 2.0 (Cat# [TT210002]).