

Product datasheet for **RC204480**

Syntrophin alpha 1 (SNTA1) (NM_003098) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Syntrophin alpha 1 (SNTA1) (NM_003098) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Syntrophin alpha 1
Synonyms:	dj1187J4.5; LQT12; SNT1; TACIP1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC204480 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCGTCCGGCAGGCGCGCCCCGCGCACCGGGTCTGGAGCTGCGCGCCGGGGCGGGCTCGGGGGCCG
 CGGCGAGCGATGGCAGCGGGTCTGCTGAGTCTGGCGGAGGACGTGCTGACCGTGAACCCCGCCGACGG
 CGACCCTGGTCCCGAGCCCGCGCTCCGCGGGAGCAGGAGCCCGCGCAGCTCAACGGCGCCGCGGAGCCG
 GGCGCCGGGCCCCGAGCTGCCAGAGGCGCTACTGCTCCAGCGCGCCGCTGACGGTGCGAAGGCCG
 ACGCCGGTGGGCTGGGCATCAGCATCAAAGGGCGCCGGGAGAACAAGATGCCTATTCTCATTTCCAAGAT
 CTTCAAGGATTGGCAGCTGACCAGACAGAGGCCCTTTTTGTGGGGATGCCATCCTGTCTGTGAATGGG
 GAAGACTTGTCTCTGCTACCCATGATGAGGCGGTGCAGGTCTCAAGAAGACAGGCAAGGAGGTGGTGC
 TGGAGGTCAAGTATATGAAGGACGTCTACCGTATTTCAAGAAGTCTACTGGTGGGACCTCGGTCCGGCTG
 GGACTCACCTCTGCCTACCCCTTCAGCGGCAGCCTTCTCCCTGGCCCCACACCCCGGAAGTTCAGC
 GAGGCCAAACACATGTCTTGAAGATGGCATATGTCTCGAAGAGGTGCACCCCAATGACCCGGAGCCCA
 GGTATCTGGAGATCTGCTCGGCAGATGGTCAAGACACCCTTCTCTGAGGGCCAAGGATGAGGCTAGTGC
 GAGGTCGTGGGCGACTGCCATCCAAGCCAGGTCAATACTCTGACGCCCGGGTCAAGGATGAGCTGCAG
 GCACTGTTGGCAGCCACCAGCACAGCTGGGAGCCAGGACATCAAGCAGATTGGCTGGTAACTGAGCAGC
 TGCCCAAGTGGGGGCACAGCCCCACCCTGGCCCTGCTAACTGAAAAGGAACTGCTCTCTACTTGTCTCT
 CCCCAGACCCCGAGGCCCTGAGCCGGCCAGCCCGTACTGCCCACTCATCGCCACCAGACTGGTGCAC
 TCAGGCCCTCCAAGGGCTCAGTGCCCTACGATGCAGAGCTCTCTTTGCCCTGCGCACGGGCACGCGTGT
 AGGTGGCTGTACCCGGGCGCCGAGGGTGTGCAGGAGGTGTCTACAGCCTGCACGTGGAATGGGCGTCCC
 TGCAGCCTGTCTGTGCACATCGACAAGGGCTTCAACTGTGGGCGCTGAGCCAGGTGCAGCCCGAGCTG
 TGCTCTGCGACAGCCCTTCGAGAAGCTGCAGATGTCTTCAAGTACGCGTCCAGTCTCCTTTCTGGA
 TTTTGGAGGTGCTGAAGGCGAGATCCAGCTGGACCTGCACTCGTGTCCAAAACCATAGTCTTCATCATC
 CACTCTTCTGTGCGCCAAAGTACCCGCTCGGGCTGTTGGCC

AG**CGGACCG**ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCC
 TGGATTACAAGGATGACGACGATAAGGTTAA

Protein Sequence:

>RC204480 protein sequence
 Red=Cloning site Green=Tags(s)

MASRRAPRTGLLELRAGAGSGAGGERWQRVLLSLAEDVLTVSPADGDPGPEPGAPREQEPAQLNGAAEP
 GAGPPQLPEALLLQRRRVTVRKADAGGLGISIKGGRENKMPILISKIFKGLAADQTEALFVGDAILSVNG
 EDLSSATHDEAVQLKKTGKEVLEVKYMKDVSPYFKNSTGGTSVGWDSPPASPLQRQPSSPGPTPRNFS
 EAKHMSLKMAYVSKRCTPNDEPRYLEICSADGQDTLFLRAKDEASARSWATAIQAQVNTLTPRVKDELQ
 ALLAAATSTAGSQDIKQIGWLTEQLPSGGTAPTLALLTEKELLLYSLPETREALSRPARTAPLIATRLVH
 SGPSKGSVPYDAELSFALRTGTRHGVDTHLFSVESPELAAWTRQLVDGCHRAAEGVQEVSTACTWNGRP
 CSLSVHIDKGFTLWAAEPGAARAVLLRQPFELQMSDDGASLLFLDFGGAEGEIQLDLHSCPKEIVFII
 HSFLSAKVTRLGLLA

SGPTRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6186_e11.zip

Restriction Sites:

Sgfl-RsrII

Cloning Scheme:


ACCN: NM_003098

ORF Size: 1515 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_003098.3](#)

RefSeq Size: 2345 bp

RefSeq ORF: 1518 bp

Locus ID: 6640

UniProt ID: [Q13424](#)

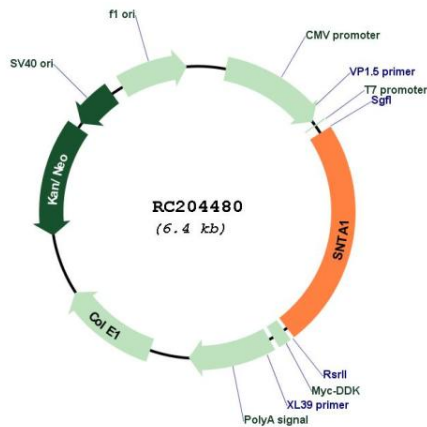
Cytogenetics: 20q11.21

Domains: PDZ, PH

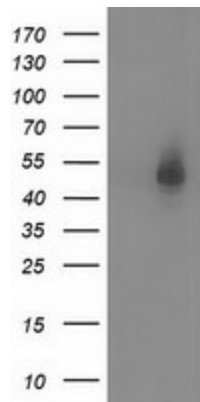
MW: 53.9 kDa

Gene Summary: Syntrophins are cytoplasmic peripheral membrane scaffold proteins that are components of the dystrophin-associated protein complex. This gene is a member of the syntrophin gene family and encodes the most common syntrophin isoform found in cardiac tissues. The N-terminal PDZ domain of this syntrophin protein interacts with the C-terminus of the pore-forming alpha subunit (SCN5A) of the cardiac sodium channel Nav1.5. This protein also associates cardiac sodium channels with the nitric oxide synthase-PMCA4b (plasma membrane Ca-ATPase subtype 4b) complex in cardiomyocytes. This gene is a susceptibility locus for Long-QT syndrome (LQT) - an inherited disorder associated with sudden cardiac death from arrhythmia - and sudden infant death syndrome (SIDS). This protein also associates with dystrophin and dystrophin-related proteins at the neuromuscular junction and alters intracellular calcium ion levels in muscle tissue. [provided by RefSeq, Jan 2013]

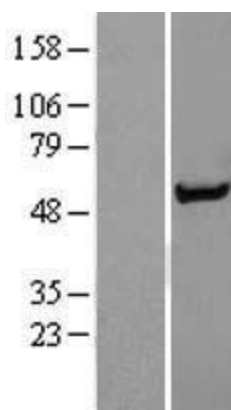
Product images:



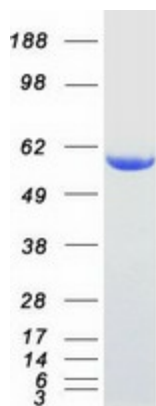
Circular map for RC204480



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY SNTA1 (Cat# RC204480, 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-SNTA1 (Cat# [TA502042]). Positive lysates [LY401080] (100ug) and [LC401080] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY401080]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204480 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified SNTA1 protein (Cat# [TP304480]). The protein was produced from HEK293T cells transfected with SNTA1 cDNA clone (Cat# RC204480) using MegaTran 2.0 (Cat# [TT210002]).