

## Product datasheet for **RG204480**

### 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:	TurboGFP
Symbol:	Syntrophin alpha 1
Synonyms:	dj1187J4.5; LQT12; SNT1; TACIP1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG204480 representing NM\_003098  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCGTCCGGCAGGCGCGCCCCGCGCACCGGGTCTGCTGGAGCTGCGCGCCGGGGCGGGCTCGGGGGCCG  
 GCGGCGAGCGATGGCAGCGGGTCTGCTGAGTCTGGCGGAGGACGTGCTGACCGTGAACCCCGCCGACGG  
 CGACCCTGGTCCCGAGCCCGCGCTCCGCGGGAGCAGGAGCCCGCGCAGCTCAACGGCGCCGCGGAGCCG  
 GGCGCCGGGCCCCGAGCTGCCAGAGGCGCTACTGCTCCAGCGCGCCGCTGACGGTGCAGCAAGGCCG  
 ACGCCGGTGGGCTGGGCATCAGCATCAAAGCGCGCCGGGAGAACAAGATGCCTATTCTCATTTCCAAGAT  
 CTTCAAGGGATTGGCAGCTGACCAGACAGAGGCCCTTTTTGTGGGGATGCCATCCTGTCTGTGAATGGG  
 GAAGACTTGTCTCTGCTACCCATGATGAGGCGGTGCAGGTCTCAAGAAGACAGGCAAGGAGGTGGTGC  
 TGGAGGTCAAGTATATGAAGGACGTCTACCGTATTTCAAGAAGTCTACTGGTGGGACCTCGGTCCGGCTG  
 GGACTCACCTCTGCCTACCCCTTCAGCGGCAGCCTTCTCCCTGGCCCCACACCCCGGAAGTTCAGC  
 GAGGCCAAACACATGTCTTGAAGATGGCATATGTCTCGAAGAGGTGCACCCCAATGACCCGGAGCCCA  
 GGTATCTGGAGATCTGCTCGGCAGATGGTCAAGACACCCTTCTCTGAGGGCCAAGGATGAGGCTAGTGC  
 GAGGTCGTGGGCGACTGCCATCCAAGCCAGGTCAATACTCTGACGCCCGGGTCAAGGATGAGCTGCAG  
 GCACTGTTGGCAGCCACCAGCACAGCTGGGAGCCAGGACATCAAGCAGATTGGCTGGTAACTGAGCAGC  
 TGCCCAAGTGGGGGCACAGCCCCACCCTGGCCCTGCTAACTGAAAAGGAACTGCTCTCTACTTGTCTCT  
 CCCCAGACCCCGAGGCCCTGAGCCGGCCAGCCCGTACTGCCCACTCATCGCCACCAGACTGGTGCAC  
 TCAGGCCCTCCAAGGGCTCAGTGCCCTACGATGCAGAGCTCTCTTTGCCCTGCGCACGGGCACGCGTCT  
 AGGTGTGGACACTCACCTGTTACGCGTGGAGTACCCGAGGAGTGGCTGCCTGGACCCGACGTTGT  
 GGATGGCTGTACCCGGGCCGAGGGTGTGCAGGAGGTGTCTACAGCCTGCACGTGGAATGGGCGTCCC  
 TGACGCTGTCTGTGCACATCGACAAGGGCTTCACTGTGGGCGCTGAGCCAGGTGCAGCCCGAGCTG  
 TGCTCTGCGACAGCCCTTCGAGAAGCTGCAGATGTCTTACAGTACGCGTCCAGTCTCCTTTCTGGA  
 TTTTGGAGGTGCTGAAGGCGAGATCCAGCTGGACCTGCACTCGTGTCCAAAACCATAGTCTTCATCATC  
 CACTCTTCTGTGCGCCAAAGTACCCGCTCGGGCTGTTGGCC

AGCGGACCGACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

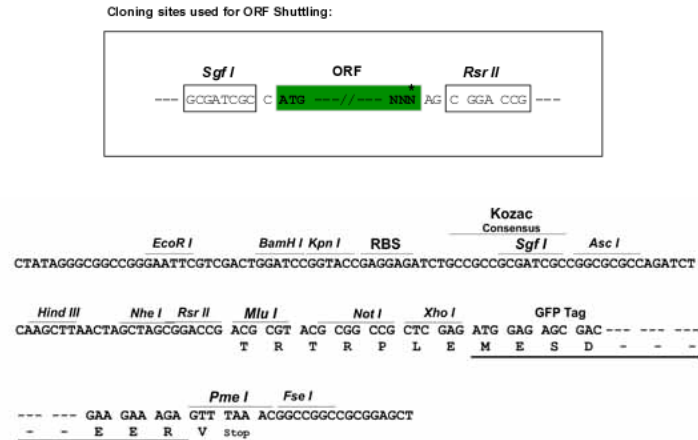
>RG204480 representing NM\_003098  
 Red=Cloning site Green=Tags(s)

MASRRAPRTGLLELRAGAGSGAGGERWQRVLLSLAEDVLTVSPADGDPGPEPGAPREQEPAQLNGAAEP  
 GAGPPQLPEALLLQRRRVTVRKADAGGLGISIKGGRENKMPILISKIFKGLAADQTEALFVGDAILSVNG  
 EDLSSATHDEAVQVLKKTGKEVLEVKYMKDVSPYFKNSTGGTSVWDSPPASPLQRQPSSPGPTPRNFS  
 EAKHMSLKMAYVSKRCTPNDPEPRYLEICSADGQDTLFLRAKDEASARSWATAIQAVNTLTPRVKDELQ  
 ALLAAATSTAGSQDIKQIGWLTEQLPSGGTAPTLALLTEKELLYLSLPETREALSRPARTAPLIATRLVH  
 SGPSKGSVPYDAELSFALRTGTRHGVDHLFVSPQELAAWTRQLVDGCHRAAEGVQEVSTACTWNGRP  
 CSLSVHIDKGFLLWAAEPGAARAVLLRQPFEKLMSSDDGASLLFLDFGGAEGEIQDLHSCPVTIVFII  
 HSFLSAKVTRLGLLA

SGPTRRRLE - GFP Tag - V

**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

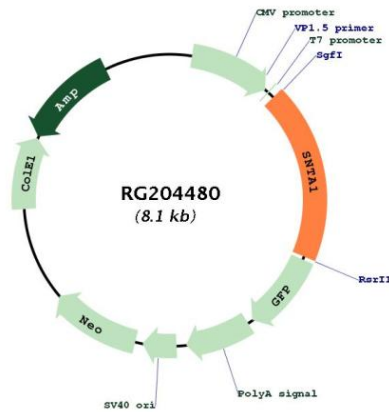
**UniProt ID:** [Q13424](#)

**Cytogenetics:** 20q11.21

**Domains:** PDZ, PH

**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 RG204480