

## Product datasheet for **RG212010**

### Nav1.5 (SCN5A) (NM\_001099405) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Nav1.5 (SCN5A) (NM_001099405) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Nav1.5
Synonyms:	CDCD2; CMD1E; CMPD2; HB1; HB2; HBBB; HH1; ICCD; IVF; LQT3; Nav1.5; PFHB1; SSS1; VF1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG212010 representing NM_001099405 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCAAACCTTCTATTACCTCGGGCACCAGCAGCTTCCGCAGGTTACACGGGAGTCCCTGGCAGCCA  
TCGAGAAGCGCATGGCAGAGAAGCAAGCCCGGGCTCAACCACCTTCAGGAGAGCCGAGAGGGGCTGCC  
CGAGGAGGAGGCTCCCCGGCCCCAGCTGGACCTGCAGGCCCTCAAAAAGCTGCCAGATCTCTATGGCAAT  
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GAGGACAGGCTCCCCAAGTCTGACTCAGAAGATGGTCCCAGAGCAATGAATCATCTCAGCCTCACCCGTG  
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 CCGACTTCCCCCTTCTCCGACAGGGACCGTGAGTCCATCGT

AGCGGACCGACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG212010 representing NM\_001099405

Red=Cloning site Green=Tags(s)

MANFLLPRGTSSFRFTRESLAAIEKRMAEKQARGSTTLQESREGLPEEEAPRPQLDLQASKKLPDLYGN  
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 VRNFTALNGTNGSVEADGLVWESLDLYLSDPENYLLKNGTSDVLLCGNSSDAGTCEPEGYRCLKAGENPDH  
 GYTSFDSFAWAFALFRLMTQDCWERLYQQTLSAGKIYMIFFMLVIFLGSFYLVNLI LAVVAMAYEEQN  
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 WWRLRKTICYHIVEHSWFETFIIFMILLSSGALAFEDIYLEERKTIKVLLLEYADKMFYVFLVEMLLKWA  
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 IPSIMNVLLVCLIFWLIFSIMGVNLFAGKFGRCINQTEGDLPLNYTIVNNKSQCESLNLGELYWTKVKV  
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 EEQKKYYNAMKKGSKKQKPIPRPLNKYQGFIFDIVTKQAFDVTIMFLICLNMVMMVETDDQSPEKIN  
 ILAKINLLFVAIFTGECIVKLAALRHYYFTNSWNIFDFVIVLISIVGTVLSDI IQKYFFSPTLFRVIRLA  
 RIGRILRLIRGAKGIRTLFLALMMSLPALFNIGLLLFLVMFIYSIFGMANFAYVKWEAGIDDMFNQTF  
 NSMLCLFQITTSAGWDGLLSPILNTGPPYCDPTLPNSNGSRGDCGSPAVGILFFTTYIIISFLIVNMYI  
 AIIENFSVATEESTEPLSEDDFDMFYIWEKFDPEATQFIEYSVLSDFADALSEPLRIAKPNQISLINM  
 DLPMSVGDRIHCMDILFAFTRKVLGESGEMDALKIQMEEKFMAANPSKISYEPITTLRRKHEEVSAMVI  
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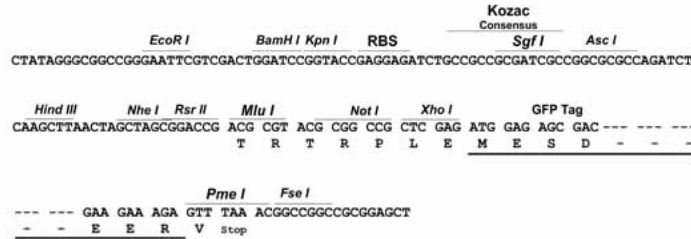
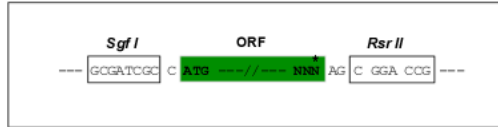
SGPTRRRLRLE - GFP Tag - V

**Restriction Sites:**

Sgfl-RsrII

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



**ACCN:** NM\_001099405

**ORF Size:** 5994 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in *E. coli* are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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\\_001099405.2](#)

**RefSeq Size:** 8450 bp

**RefSeq ORF:** 5997 bp

**Locus ID:** 6331

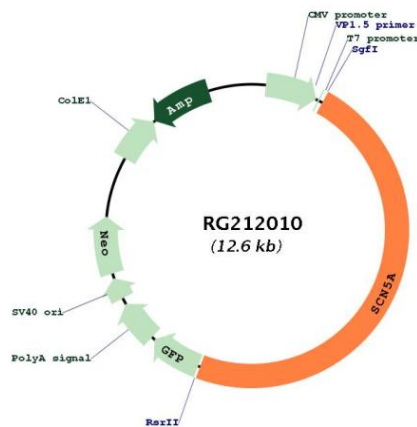
**UniProt ID:** [Q14524](#)

**Cytogenetics:** 3p22.2

**Protein Families:** Druggable Genome, Ion Channels: Sodium, Transmembrane

**Gene Summary:** The protein encoded by this gene is an integral membrane protein and tetrodotoxin-resistant voltage-gated sodium channel subunit. This protein is found primarily in cardiac muscle and is responsible for the initial upstroke of the action potential in an electrocardiogram. Defects in this gene are a cause of long QT syndrome type 3 (LQT3), an autosomal dominant cardiac disease. Alternative splicing results in several transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008]

### Product images:



Circular map for RG212010