

## Product datasheet for **RG223887**

### Nav1.6 (SCN8A) (NM\_014191) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Nav1.6 (SCN8A) (NM_014191) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Nav1.6
Synonyms:	BFIS5; CERIII; CIAT; DEE13; EIEE13; MED; MYOCL2; NaCh6; Nav1.6; PN4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG223887 representing NM_014191 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCAGCGGGCTGCTTGCCCCACCAGGCCCTGATAGTTTCAAGCCTTTCACCCCTGAGTCACTGGCAA  
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CGATGAGGACAGCAAGCCCAAGCCAAACAGCGACCTGGAAGCAGGGAAGAGTTTGCCTTTCATCTACGGG  
GACATCCCCCAAGCCTGGTTGCAGTTCCTTGGAGGACTTTGACCCATACTATTGACGCAGAAAACT  
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AGACGTAACAGGAGAAAGAAGAGGAAGCAAAAGGAACTCTCTGAAGGAGAGGAGAAAGGGGATCCCAGAGA  
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ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG223887 representing NM\_014191  
 Red=Cloning site Green=Tags(s)

MAARLLAPPGPDSFKPFTPELANIERRIAESKLLKPPKADGSHREDDSDSKPKNSDLEAGKSLPFIYG  
 DIPOQLVAVPLEDFDPYLLTQKTFVVLNRGKTLFRFSATPALYILSPFNLIRRIAIKILIHVSFMIIMC  
 TILTNCVFMFTSNPPDWSKNVEYFTGTIYTFESLVKIIARGFCIDGFTFLRDPWNWLDVSVIMMAYITEF  
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 ADIHRNGDFQKNGNGTTSIGIGSSVEKYIIDEDHMSFINNPNLTVRVPIAVGESDFENLNTEDVSSSDPE  
 GSKDKLDDTSSSEGSTIDIKPEVEEVPVEQPEEYLDPDACFTGCVQRFKCCQVNI E EGLGKSWWILRKT  
 CFLIVEHWNWFETFIIFMILLSSGALAFEDIYIEQRKTIRTILEYADKVFTYIFILEMLLKWTAYGFVKFF  
 TNAWCWDLFLIVAVSLVSLIANALGYSELGAIKSLRTRLRALRPLRALSRFEGMRVVVNALVGAIPSIMNV  
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 KKKFGGQDIFMTEEKQKYNAMKLGSKPKQKIPRPLNKIQGIVDFVFTQQAFDIVIMMLICLNMVTMM  
 VETDTSQKQMENILYWINLVFVIFFTCECVLKMFLRHYFTIGWNI FDFVIVL SIVGMFLADIEKYF  
 VSPTLFRVIRLARI GRILRLIKGAKGIRTL L FALMMSLPALFNIGLLLFLVMFIFSI FGMNSNFAYVKEA  
 GIDDMFNFTFGNSMICLFQITTSAGWDGLLLPILNRPPDCSLDKEHPGSGFKGDCGNPSVGIFFVSYI  
 IISFLIVVNMYYIAIILENF SVATEESADPL SEDDFETFYEIWEKFDPDATQFIEYCKLADFADALEHPLR  
 VPKPNTIELIAMDLPVSGDRIHCLDILFAFTKRVLGDSGELDILRQQMEERFVASNPSKVSYPITTTL  
 RRKQEEVSAVVLQRAYRGHLARRGFICKKTTSNKLENGGTHREKKESTPSTASLPSYDSVTKPEKEKQQR  
 AEEGRERAKRQKEVRESKC

TRTRPLE - GFP Tag - V

**Restriction Sites:**

Sgfl-MluI

**Cloning Scheme:**


**ACCN:** NM\_014191

**ORF Size:** 5940 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\\_014191.1](#), [NP\\_055006.1](#)

**RefSeq Size:** 7008 bp

**RefSeq ORF:** 5943 bp

**Locus ID:** 6334

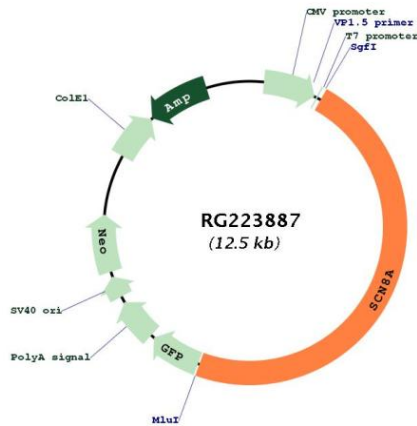
**UniProt ID:** [Q9UQD0](#)

**Cytogenetics:** 12q13.13

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

**Gene Summary:** This gene encodes a member of the sodium channel alpha subunit gene family. The encoded protein forms the ion pore region of the voltage-gated sodium channel. This protein is essential for the rapid membrane depolarization that occurs during the formation of the action potential in excitable neurons. Mutations in this gene are associated with cognitive disability, pancerebellar atrophy and ataxia. Alternate splicing results in multiple transcript variants.[provided by RefSeq, May 2010]

### Product images:



Circular map for RG223887