

## Product datasheet for RC220167

### SCN1A (NM\_006920) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	SCN1A (NM_006920) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	SCN1A
Synonyms:	DEE6; DEE6A; DEE6B; DRVT; EIEE6; FEB3; FEB3A; FHM3; GEFSP2; HBSCI; NAC1; Nav1.1; SCN1; SMEI
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-Myc-DDK (PS100007)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RC220167 representing NM_006920 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCCGCGATCGCC

ATGGAGCAAACAGTGCTTGTACCACCAGGACCTGACAGCTTCAACTTCTTACCAGAGAATCTCTTGCGG  
CTATTGAAAGACGCATTGCAGAAGAAAAGGCAAAGAATCCCAAACCAGACAAAAAGATGACGACGAAAA  
TGGCCCAAAGCCAAATAGTGACTTGAAGCTGGAAGAACCTTCCATTTATTTATGGAGACATTCCTCCA  
GAGATGGTGTGAGAGCCCTGGAGGACCTGACCCCTACTATCAATAAGAAAACCTTTATAGTATTGA  
ATAAAGGGAAGGCCATCTCCGGTTCAGTGCCACCTCTGCCCTGTACATTTAACTCCCTCAATCCTCT  
TAGGAAAATAGCTATTAAGATTTTGGTACATTCATTATTCAGCATGCTAATTATGTGCACTATTTTGACA  
AACTGTGTGTTTATGACAATGAGTAACCCTCCTGATTGGACAAAGAATGTAGAATACACCTTCACAGGAA  
TATATACTTTTGAATCACTTATAAAAAATTATTGCAAGGGGATTCTGTTTGAAGATTTTACTTTCCTTCG  
GGATCCATGGAACCTGGCTCGATTTCACTGTCAATTACATTTGCGTACGTACAGAGTTTGTGGACCTGGGC  
AATGTCTCGGCATTGAGAACATTCAGAGTTCTCCGAGCATTGAAGACGATTTTCAGTCATTCCAGGCCTGA  
AAACCATTTGTTGGGAGCCCTGATCCAGTCTGTGAAGAAGCTCTCAGATGTAATGATCCTGACTGTGTTCTG  
TCTGAGCGTATTTGCTCTAATTTGGGCTGCAGCTGTTTATGGGCAACCTGAGGAATAAATGTATACAATGG  
CCTCCCACCAATGCTTCTTTGGAGGAACATAGTATAGAAAAGAATATAACTGTGAATTATAATGGTACAC  
TTATAAATGAAACTGTCTTTGAGTTTGACTGGAAGTCAATATTTCAAGATTCAAGATATCATTATTTCT  
GGAGGGTTTTTTAGATGCACTACTATGTGAAAATAGCTCTGATGCAGGCCAATGTCCAGAGGGATATAG  
TGTGTGAAAGCTGGTAGAAATCCCAATTATGGCTACACAAGCTTTGATACCTTCAGTTGGGCTTTTTTGT  
CCTTGTTCGACTAATGACTCAGGACTTCTGGGAAAATCTTTATCAACTGACATTACGTGCTGCTGGGAA  
AACGTACATGATTTTTTTGTGTTGGTCAATTTCTGGGCTATTCTACCTAATAAATTTGATCCTGGCT  
GTGGTGGCCATGGCCTACGAGGAACAGAATCAGGCCACCTTGAAGAAGCAGAACAGAAAGAGGCCGAAT  
TTCAGCAGATGATTGAACAGCTTAAAAAGCAACAGGAGGCAGCTCAGCAGGCAGCAACGGCAACTGCCTC



AGAACATTCCAGAGAGCCAGTGCAGCAGGCAGGCTCTCAGACAGCTCATCTGAAGCCTCTAAGTTGAGT  
TCCAAGAGTGCTAAGGAAAGAAGAAATCGGAGGAAGAAAAGAAAACAGAAAGAGCAGTCTGGTGGGGAAG  
AGAAAGATGAGGATGAATTCAAAAATCTGAATCTGAGGACAGCATCAGGAGGAAAGTTTTTCGTTCTC  
CATTGAAGGGAACCGATTGACATATGAAAAGAGGTACTCTCCCCACACCAGTCTTTGTTGAGCATCCGT  
GGCTCCCTATTTTACCAAGGCGAAATAGCAGAACAAGCCTTTTCAGCTTTAGAGGGCGAGCAAAGGATG  
TGGGATCTGAGAACGACTTCGCAGATGATGAGCACAGCACCTTTGAGGATAACGAGAGCCGTAGAGATTC  
CTTGTTTTGCCTCGACGACCGGAGAGAGACGCAACAGCAACCTGAGTCAGACCAGTAGGTCATCCCGG  
ATGCTGGCAGTGTTCAGCGAATGGAAGATGCACAGCACTGTGGATTGCAATGGTGTGGTTTTCTTGG  
TTGGTGGACCTTCAGTTCCTACATCGCCTGTTGGACAGCTTCTGCCAGAGGGAACAACCACTGAAACTGA  
AATGAGAAAGAGAAGGTCAAGTCTTTCCACGTTTCCATGGACTTTCTAGAAGATCCTTCCCAAAGGCAA  
CGAGCAATGAGTATAGCCAGCATTCTAACAAAACAGTAGAAGAAGTGAAGAATCCAGGCGAGAAATGCC  
CACCTGTTGGTATAAATTTTCCAACATATTCTTAATCTGGGACTGTTCTCCATATTGGTTAAAAGTGAA  
ACATGTTGTCAACCTGGTCGTGATGGACCCATTTGTTGACCTGGCCATCACCATCTGTATTGTCTTAAAT  
ACTTTTTCATGGCCATGGAGCACTATCCAATGACGGACCATTTCAATAATGTGCTTACAGTAGGAAACT  
TGTTTTCTACTGGGATCTTTACAGCAGAAATGTTTCTGAAAATTATTGCCATGGATCCTTACTATTATT  
CCAAGAAGGCTGGAATATCTTTGACGGTTTTATTGTGACGCTTAGCCTGGTAGAACTGGACTCGCCAAT  
GTGGAAGGATTATCTGTTCTCCGTTTCAATTCGATTGCTGCGAGTTTTCAAGTTGGCAAAATCTTGGCCAA  
CGTTAAATATGCTAATAAAGATCATCGGCAATTCGGTGGGGGCTCTGGGAAATTTAACCCCTCGTCTTGGC  
CATCATCGTCTTCATTTTTGCCGTGGTCGGCATGCAGCTCTTTGGTAAAAGCTACAAAGATTGTGTCTGC  
AAGATCGCCAGTGATTGTCAACTCCCACGCTGGCAGATGAATGACTTCTTCCACTCCTTCTGATTGTGT  
TCCCGTGTCTGTGGGGAGTGGATAGAGACCATGTGGGACTGTATGGAGTTGCTGGTCAAGCCATGTG  
CCTTACTGTCTTCATGATGGTCATGGTATTGGAACCTAGTGGTCTGAATCTTTCTGGCCTTGCTT  
CTGAGCTCATTTAGTGCAGACAACCTTGCAGCCACTGATGATGATAATGAAATGAATAATCTCCAAATG  
CTGTGGATAGGATGCACAAGGAGTAGCTTATGTGAAAAGAAAATATATGAATTTATTCAACAGTCCTT  
CATTAGGAAACAAAAGATTTTAGATGAAATTAACCACTTGATGATCTAAACAACAAGAAAGACAGTTGT  
ATGTCCAATCATACAACAGAAATGGGAAAGATCTTGACTATCTTAAAGATGTAATGGAAGTACAAGTG  
GTATAGGAACTGGCAGCAGTGTGAAAAATACATTATTGATGAAAGTGATTACATGTCTTATAAACA  
CCCCAGTCTTACTGTGACTGTACCAATTGCTGTAGGAGAATCTGACTTTGAAAATTTAAACACGGAAGAC  
TTTAGTAGTGAATCGGATCTGGAAGAAAGCAAAGAGAACTGAATGAAAGCAGTAGCTCATCAGAAGGTA  
GCACTGTGGACATCGGCGCACCTGTAGAAGAACAGCCCGTAGTGAACCTGAAGAACTCTTGAACCAGA  
AGCTTGTTCCTGAAGGCTGTGTACAAGATTCAAGTGTGTCAAATCAATGTGGAAGAAGGCAGAGGA  
AAACAATGGTGAACCTGAGAAGGACGTGTTCCGAATAGTTGAACATAACTGGTTTTGAGACCTTATTG  
TTTTCATGATTCTCCTTAGTAGTGGTGCTCTGGCATTGAAAGATATATATTGATCAGCGAAAAGACGAT  
TAAGACGATGTTGGAATATGCTGACAAGTTTTCACTTACATTTTCACTTCTGAAATGCTTCTAAAATGG  
GTGGCATATGGCTATCAACATATTTACCAATGCCTGGTGTGGCTGGACTTCTTAATTGTTGATGTTT  
CATTGGTCAGTTTAAACAGCAATGCCTTGGGTTACTCAGAACTTGGAGCCATCAATCTCTCAGGACACT  
AAGAGCTCTGAGACCTCTAAGAGCCTTATCTCGATTTGAAGGGATGAGGGTGGTTGTGAATGCCCTTTA  
GGAGCAATTCATCCATCATGAATGTGCTTCTGGTTTGTCTTATATTCTGGCTAATTTTCAGCATCATGG  
CGGTAATTTGTTTGTGGCAAATCTACCAGTATTAACACCACAACCTGGTGACAGGTTTGACATCGA  
AGACGTGAATAATCATACTGATTGCCTAAAACCTAATAGAAAAGAAATGAGACTGCTCGATGGAAAAATGTG  
AAAGTAACTTTGATAATGTAGGATTTGGGTATCTCTCTTTGCTTCAAGTTGCCACATTCAAAGGATGGA  
TGGATATAATGTATGCAGCAGTTGATTCCAGAAATGTGGAAGTCCAGCCTAAGTATGAAGAAAGTCTGTA  
CATGTATCTTTACTTTGTTATTTTTCATCATCTTTGGGTCCTTCTCACCTTGAACCTGTTTATTGGTGTC  
ATCATAGATAATTTCAACCAGCAGAAAAAGAAAGTTTGGAGGTCAAGACATCTTTATGACAGAAGAACAGA  
AGAAATACTATAATGCAATGAAAAAATAGGATCGAAAAAACCGAAAAGCCTATACCTCGACCAGGAAA  
CAAATTTCAAGGAATGGTCTTTGACTTCGTAACCAGACAAGTTTTTACATAAGCATCATGATTCTCATC  
TGCTTAAACATGGTCACAATGATGGTGGAAACAGATGACCAGAGTGAATATGTGACTACCATTTTGTGAC  
GCATCAATCTGGTGTTCATTGTGCTATTTACTGGAGAGTGTGACTGAAACTCATCTCTACGCCATTA  
TTATTTTACCATTGGATGGAATATTTTTGATTTTGTGGTTGTCATTCTCTCCATTGTAGGTATGTTTCTT  
GCCGAGCTGATAGAAAAGTATTTTCGTGTCCTTACCCTGTTCCGAGTGATCCGTCTTGTAGGATTGGCC  
GAATCCTACGTCTGATCAAAGGAGCAAAGGGGATCCGACGCTGCTCTTTGCTTTGATGATGTCCCTTCC  
TGCGTTGTTTAAACATCGGCTCTACTCTTCTAGTCATGTTTCTACGCCATCTTTGGGATGTCCAAC

TTTGCCTATGTTAAGAGGGAAGTTGGGATCGATGACATGTTCAACTTTGAGACCTTTGGCAACAGCATGA  
TCTGCCTATTCCAAATTACAACCTCTGCTGGTGGGATGGATTGCTAGCACCCATTCTCAACAGTAAGCC  
ACCCGACTGTGACCCTAATAAAGTTAACCTGGAAGCTCAGTTAAGGGGAGACTGTGGAAACCCATCTGTT  
GGAATTTTCTTTTTGTCAAGTTACATCATATCCTTCTGGTGTGGTGAACATGTACATCGCGGTCA  
TCCTGGAGAACTCAGTGTGCTACTGAAGAAAGTGCAGAGCCTCTGAGTGAGGATGACTTTGAGATGTT  
CTATGAGGTTTGGGAGAAGTTTATCCCGATGCAACTCAGTTTATGGAATTTGAAAAATATCTCAGTTT  
GCAGCTGCGCTTGAACCGCCTCTCAATCTGCCACAACCAACAACTCCAGCTCATTGCCATGGATTTGC  
CCATGGTGAGTGGTACCAGGATCCACTGTCTTGATATCTTATTTGCTTTTACAAAGCGGGTCTAGGAGA  
GAGTGGAGAGATGGATGCTCTACGAATACAGATGGAAGAGCGATTGCTGCTTCCATCCTTCCAAGGTC  
TCCTATCAGCCAATCACTACTACTTTAAAAACGAAAAAAGAGGAAGTATCTGCTGTCATTATTCAGCGTG  
CTTACAGACGCCACCTTTTAAAGCGAACTGTAACAAGCTTCTTTACGTACAATAAAAAACAAATCAA  
AGGTGGGGCTAATCTTCTATAAAAAGACATGATAATTGACAGAATAAATGAAAACCTATTACAGAA  
AAAACCTGATCTGACCATGCTCACTGCAGCTTGTCCACCTCTATGACCGGGTGACAAAGCCAATTGTGG  
AAAAACATGAGCAAGAAGCAAAGATGAAAAGCCAAAGGGAAA

ACGCGTACGCGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

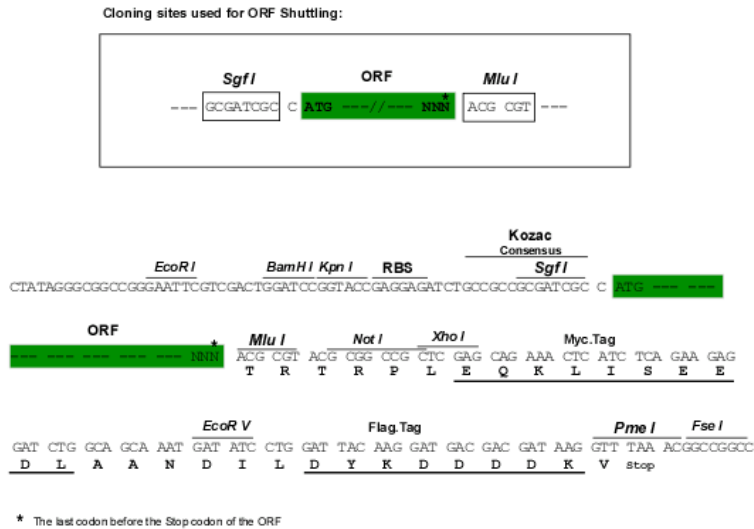
>RC220167 representing NM\_006920  
Red=Cloning site Green=Tags(s)

MEQTVLVPPGPDFSNFFFTRESLAAIERRIAEEKAKNPKPKDKDDDENGPKPNSDLEAGKNLFFIYGDIPP  
EMVSEPLEDLDPYYINKKTFIVLNKGKAIFFRSATSALYILTPFNPLRKAIAIKILVHSLFSLMIMCTILT  
NCVFMTHSNPPDWTKNVEYFTFTGIYTFESLIKIIARGFLEDFTFLRDPWNWLDFTVITFAFVTEFVDLG  
NVSALRTRFRVLRALKTIISVIPGLKTIIVGALIQSVKKLSDVMILTVFCLSVFALIGLQFLMGNLRNKCIQW  
PPTNASLEEHSIEKNITVNYNGTLINETVFEFDWKSQYIQDSRYHYFLEGLDALLCGNSSDAGQCPEGYM  
CVKAGRPNPNYGYTSFDTFSWAFSLFRLMTQDFWENLYQLTLRAAGKTYMIFVFLVIFLGSFYLINLILA  
VVAMAYEEQNQATLEEAQEKEAEFQQMIEQLKKQQEAAQQAATATASEHSREPSAAGRLSDSSSEASKLS  
SKSAKERRNRKRKRKQEQSGGEEKDEDEFQKSESEDSIRRRKGRFRFSIEGNRLTYEKRYSSPHQSLLSIR  
GSLFSPRRNSRSLFSFRGRAKDVGSSENDFADEHSTFEDNESRRDSLFPVRRHGERRNSNLQTSRSSL  
MLAVFPANGKMHSTVDCNGVSVLVGGPSVPTSPVGQLLPEGTTTEMRKRRSSSFHVSMDFLEDPSQRQ  
RAMSIASILTNTVEELEESRQKPPCWYKSNIFLIWDCSPYWLKVKHVNLVVMDFVDLAITICIVLN  
TLFMAMEHYPMTHFNNVLTGVLVFTGIFTAEMFLKIIAMDPIYFQEGWNIQDFIVTSLVELGLAN  
VEGLSVLRSFRLRVFKLAKSWPTLNMLIKIIGNSVGALGNLTLVLAIIIVFIFAVVGMQLFGKSYKDCVC  
KIASDCQLPRWHMNDFFHSFLIVFRVLCGEWIETMWDCEVAGQAMCLTFMFMVMVIGNLVVNLFLALL  
LSSFADNLAATDDDNEMNQLIAVDRMHKGVAVYVKKIYEFIQQSFIRKQKILDEIKPLDDLNNKKDSC  
MSNHTEIGKDLDYLDVNGTTSIGTGSVEKYIIDESDYMSFINNPSLTVTVPIAVGESDFENLNTED  
FSSESDLEESKEKLNESSSSEGSTVDIGAPVEEQPVVEPEETLEPEACFTEGCVQRFKCCQINVEEGRG  
KQWNLRRCTFRIVEHNFETIFVMILLSSGALAFEDIYIDQRKTIKTMLEYADKVFTYIFILEMLLKW  
VAYGYQTYFTNAWCWLDLIVDVSLSLTANALGYSELGAIKSLRTRLRALRPLRALSRFEGMRVVVNALL  
GAIPSIMNVLLVCLIFWLIFSIMGVNLFAGKFYHCINTTTGDRFDIEDVNNHTDCLKLIERNETARWKNV  
KVNFDNVGFGYLSLLQVATFKGWMIMYAADVSRNVELQPKYEEESLYMYLYFVIFIFIGSFFTLNLFIGV  
IIDNFNQKKKFGGQDIFMTEEQKKYINAMKLGSKPKQKPIPRPGNKFGQGMVDFVTRQVDFDISIMILI  
CLNMVMTMMVETDDQSEYVTTILSRINLVFIVLFTGECVLKILSLRHYYFTIGWNIQDFVIVVILSIVGMFL  
AELIEKYFVSPTLFRVIRLARIGRILRLIKGAKGIRTLFLALMMSLPALFNIGLLFLVMFYAIFGMSN  
FAYVKREVGIDDMFNFTFGNSMICLFQITTSAGWDGLLAPILNSKPPDCDPNKVNPSSVKGDCGNPSV  
GIFFFVSYIIISFLVVVNYIAVILENFVATEESAEPLEDDFEMFYEVWEKFDPDATQFMEFEKLSQF  
AAALEPPLNLPQPNKLQIAMDLPVMSGDRIHCLDILFAFTRVLEGESEMDALRIQMEERFMASNPQV  
SYQPIITTLKRRQEEVSAVIIQRAYRRHLLKRTVKQASFTYNKNKIKGGANLLIKEDMIIDRINENSITE  
KTDLTMSTAACPPSYDRVTKPIVEKHEQEGKDEKAKGK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM\_006920

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).

<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_006920.6</a>
<b>RefSeq Size:</b>	6046 bp
<b>RefSeq ORF:</b>	5997 bp
<b>Locus ID:</b>	6323
<b>UniProt ID:</b>	<a href="#">P35498</a>
<b>Cytogenetics:</b>	2q24.3
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>MW:</b>	227.6 kDa
<b>Gene Summary:</b>	<p>Voltage-dependent sodium channels are heteromeric complexes that regulate sodium exchange between intracellular and extracellular spaces and are essential for the generation and propagation of action potentials in muscle cells and neurons. Each sodium channel is composed of a large pore-forming, glycosylated alpha subunit and two smaller beta subunits. This gene encodes a sodium channel alpha subunit, which has four homologous domains, each of which contains six transmembrane regions. Allelic variants of this gene are associated with generalized epilepsy with febrile seizures and epileptic encephalopathy. Alternative splicing results in multiple transcript variants. The RefSeq Project has decided to create four representative RefSeq records. Three of the transcript variants are supported by experimental evidence and the fourth contains alternate 5' untranslated exons, the exact combination of which have not been experimentally confirmed for the full-length transcript. [provided by RefSeq, Oct 2015]</p>