

Product datasheet for **SC128285**

SCN7A (NM_002976) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	SCN7A (NM_002976) Human Untagged Clone
Tag:	Tag Free
Symbol:	SCN7A
Synonyms:	NaG; Nav2.1; Nav2.2; SCN6A
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene sequence for NM_002976 edited AGAAAACCCGAGAGATCCGTGGAGAAAAGAGAAGCCAGGAGGAGGAAAAGGCTCCAAGGA GCCCTAGCTCCTGAAGGGTCCCTCAGGCACTGGTGGAGACCTGTCGCTTCGTAGCAAGTA CAAAATTGGAAATGTTGGCTTACCAGAACCTAAGGGCCTTGTTCCCTTCACTAAAGAGT CTTTTGAAGTATAAAACAGCATATTGCTAAAACACATAATGAAGACCATTGAAGAAGAAG ACTTAAAGCCAAATCCTGATTTGGAAGTTGGCAAAAAGCTTCCATTTATTTATGGAAACC TTTCTCAAGGAATGGTGTGAGAGCCCTTGGAAAGATGTGGACCCATATTACTACAAGAAAA AAAATACTTTTATAGTATTAATAAAAAATAGAACAATCTTCAGATTCAATGCGGCTTCCA TCTTGTGTACATTGTCTCCTTTCAATTGTATTAGAAGAACAATCAAGGTTTTGGTAC ATCCCTTTTTCCAAGTATTCTAATTAGTGTCTGATTGATTGCGTATTCATGTCCC TGACTAATTTGCCAAAATGGAGACCAGTATTAGAGAATACTTTGCTTGGAAATTTACACAT TTGAAATACTTGTAAAACCTTTTCAAGAGGTGTCTGGGCAAGGATCATTTTCCTTCTCG GTGATCCATGGAAGTGGCTCGATTTTCAAGGTAAGTGTGTTTGGAGTTATTATAAGATACT CACCTCTGGACTTCATCCAACGCTTCAAAGTCAAGAACTTTGAGAATTTTAAAAATTA TTCCTTTAAATCAAGGTCTGAAATCCCTTGTAGGGTCTGATCCACTGCTTGAAGCAGC TTATTGGTGTCTATCCTAAGTCTGTTTTTCTGAGCATATTTTCTCTAATTGGGATGG GGCTCTTCATGGGCAACTTGAACATAAATGTTTTCGATGGCCCCAAGAGAATGAAAATG AAACCCGACAAACAGAACTGGAAACCCATATTATATTCGAGAAACAGAAAACCTTTTATT ATTTGGAAAGGAGAAAGATATGCTCTCCTTTGTGGCAACAGGACAGATGCTGGTCAGTGTC CTGAAGGATATGTGTGTAAAAGCTGGCATAAATCCTGATCAAGGCTTCAAAAATTTTG ACAGTTTTGGCTGGGCTTATTTGCCCTATTTTCGTTAATGGCTCAGGATTACCCTGAAG TACTTTATCACCAGATACTTTATGCTTCTGGGAAGGTCTACATGATATTTTTTGGTGG TAAGTTTTTTGTTTTCTTTTATATGGCAAGTTTGTCTTAGGCATACTTGCCATGGCCT ATGAAGAAGAAAAGCAGAGAGTTGGTGAATATCTAAGAAGATTGAACAAAATTTCAAC AGACTGGAAAAGAACTTCAAGAAGGAAATGAAACAGATGAGGCCAAGACCATAACAATAG AAATGAAGAAAAGGTCACCAATTTCCACAGACACATCATTGGATGTGTTGAAGATGCTA CTCTCAGACATAAGGAAGAACTTAAAAATCCAAGAAGATATGCCATTATACTGGTATA



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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_002976 unedited
 ACCGTCGGTTGCGCAAAGGGCGGTAGGCGTGTACTGTTGGGAGGTCTATATAAGCAGAGC
 TCAGAAAAACCGAGAGATCCGTGGAGAAAGAGAAGCCCAGGAGGAGGAAAAAGGCTCCAA
 GGAGCCCTAGCTCCTGAAGGGTCCCTCAGGCACTGGTGGAGACCTGTCGCTTCGTAGCAA
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 TACTCACCTCTGGACTTCATTCCAACGCTTCAAAGTCAAGAACTTTGAGATTTTAAAA
 ATTATTCCTTTAAATCAAGTCTGAATCCCTTGTAGGGTCTGATCACTGCTGAGCAGCTAT
 GTGTCATTATCCTAACTCTGTTTTTCTGGAGCATATTTTCTTCTAT

3' Read Nucleotide Sequence:

>Forward primer walk for NM_002976 unedited
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 TGTCTAATTTTGAACCTTTGGCAACAGTATGCTCTGCTTTTTCAAGTTGCAATATTTG
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 ATAAAATTAACCTGGGACTCAAGTTAGAGGAGATTGTGGGAACCCCTCTGTTGGGATTT
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 TTGTCATGGAGTTTTTAAATATTGCTTCTAAGAAGAAAAACAAGACCTTGAGTGAAGATG
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 TAGATGGTGACAGAGATGTTTATGCTACTAAAGAAGTGCCTATTTTGACAAAGCTAAGGA
 AAAGTCACCTATTCAAAGCCAGATCTATACCACTTACCACCTCTTTCATATTTCTCACAT
 ATCTGAAAAATGTGAAAGCCTAGCAGGAATAAAAGAAAAGTAGAGATAATAATCAGT

Restriction Sites:

Please inquire

ACCN:

NM_002976

Insert Size:

7200 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 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](#)

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_002976.2](#), [NP_002967.2](#)

RefSeq Size: 5727 bp

RefSeq ORF: 5049 bp

Locus ID: 6332

UniProt ID: [Q01118](#)

Cytogenetics: 2q24.3

Protein Families: Druggable Genome, Ion Channels: Other, Transmembrane

Gene Summary:

This gene encodes one of the many voltage-gated sodium channel proteins. For proper functioning of neurons and muscles during action potentials, voltage-gated sodium channels direct sodium ion diffusion for membrane depolarization. This sodium channel protein has some atypical characteristics; the similarity between the human and mouse proteins is lower compared to other orthologous sodium channel pairs. Also, the S4 segments, which sense voltage changes, have fewer positive charged residues than in other sodium channels; domain 4 has fewer arginine and lysine residues compared to other sodium channel proteins. Several alternatively spliced transcript variants exist, but the full-length natures of all of them remain unknown. [provided by RefSeq, Dec 2011]

Transcript Variant: This variant (1) is the protein-coding transcript. Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.