

Product datasheet for MR222902

Scn5a (NM_021544) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Scn5a (NM_021544) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Scn5a
Synonyms:	mH1; Nav1.5; Nav1.5c; SkM1; SkM2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR222902 representing NM_021544 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCAAACCTTCTGTTACCTCGGGGCACCAGCAGCTTCCGTAGGTTACCCGGGAGTCACTGGCGGCCA
TCGAGAAGCGCATGGCTGAAAAACAAGCCCGTGGTTTCGGCCACCTCACAGGAGAGCCGTAGGGCCCTGCC
AGAGGAGGAGGCTCCCCGGCCCCAGCTGGACCTACAGGCCCTCAAAAAGCTGCCAGATCTCTATGGCAAC
CCACCCCGAGAGCTCATTGGGGAGCCCCGGAAGACCTGGACCTTTCTATAGTACCCAGAAGACCTTCA
TCGTGCTGAATAAGGGCAAACCATCTTCCGGTTCAGTGCCACCAATGCCTTGTACGTCCTCAGCCCTT
CCACCCGGTGCAGAGCGGCTGTGAAGATTTTGGTACATTCGCTCTTACGATGCTCATCATGTGCACC
ATCCTAACCAACTGTGTGTTTCATGGCACAACACGACCCTCCGCCTTGGACCAAATATGTTGAGTACACCT
TCACCGCCATCTACACCTTTGAGTCTCTGGTCAAGATTCTAGCTCGAGGCTTCTGCCTGCATGCGTTTAC
CTTCTCCGGGACCCGTGGAACCTGGCTAGACTTTCAGTGTGATCGTCATGGCGTATGTATCAGAGAATATA
AAGCTAGGCAATTTGTCGGCTCTTCAACTTTCAGAGTCTGAGAGCTCTGAAAACGATTTTCAGTTATTC
CAGGCCGAAGACAATCGTGGGAGCCCTAATCCAGTCTGTGAAGAAGCTAGCCGATGTGATGGTCCCTTAC
TGTCTTCTGCCTCAGTGTCTTTGCCCTCATTGGCTGCAGCTCTCATGGCAACCTGAGGCACAAGTGC
GTGCGTAACCTTACTGAGCTCAATGGCACCAATGGTTCGGTGGAGCCGATGGCAGTCTGGAACCTCTC
TGGAGTCTACCTCAATGACCCAGCCAATTACCTACTCAAGAATGGCACCACGGATGTGTTGTGTGG
GAACAGCTCTGATGCCGGACATGTCCTGAAGGCTACCGTGCCTGAAGGCAGGTGAGAACCCTGACCAC
GGTTACACCAGCTTCGACTCCTTCGCCTGGGCTTTCCTTGCCTCTTCCGCCTGATGACACAGGACTGCT
GGGAACGTCTATACCAGCAGACCCTGAGGTCCGCAGGAAAGATCTACATGATCTTCTTATGCTTGTGCAT
ATTCTGGGCTCCTTCTACCTTGTGAACCTTGTGCTGTGGTGGCCATGGCTTACGAGGAGCAAAC
CAAGCCACCATCGCCGAGACGGAAGAGAAGGAGAAGCGTTTCCAGGAGGCCATGGAGATGCTCAAGAAGG
AACACGAGGCTCTCACCATCAGGGCGTGGATACTGTGTCCCGTAGCTCTCTGGAGATGTCTCCTTTGCC
CCCAGTAACCAACCATGAGAGAAGGAGCAAGAGGAGGAAACGACTGTCTTCAAGGACAGAGGATGGCGGA



[View online »](#)

GATGACAGGCTCCCCAAGTCGGACTCAGAAGACGGTCCCAGAGCATTGAATCAGCTCAGCCTCACCCATG
 GGCTCAGCCGGACATCCATGAGGCCCGCTCCAGCCGAGGGAGCATTTCACATTCGGCGACGGGACCA
 AGGCTCCGAGGCAGATTTTGCAGATGACGAGAACAGTACAGCAGGAGAGAGCGAGAGCCACCCGACATCG
 CTGCTGGTGCCTGGCCCTGCGCCGTCACAGCACCAAGGGCAGCCGGCTTTGGAACCTCAGCTCCTG
 GTCATGTCCTCAATGGCAAAAAGAACAGCACCGTGGACTGCAATGGGGTGGTTTCCTTGCTGGGGCAGG
 GGACGCAGAGGCCACCTCTCCAGGGAGCCACCTTCTCCGCCATAGTGTGACAGACCCCCAGACACG
 ACCACGCCGTGAGAGAGCCGGTGGGCCAGATGCTGACACCCGAGGCTCCATGTGCAGATGGCTTTG
 AGGAGCCCGGGGACGGCAACGGCACTCAGCCGTCAGTGTCCACAGCGCTTGGAAAGAGTTGGA
 GGAGTCCACCGTAAGTGTCCACCATGCTGGAATCGCTTTGCCAGCATTACCTCATCTGGGAGTGTGC
 CCACTCTGGATGTCCATCAAGCAGAAGGTGAAGTTCGTGGTCATGGACCCGTTTGTGACCTCACCATCA
 CCATGTGCATCGTCTAACACGCTCTTCATGGCTCTGGAGCACTACAACATGACAGCCGAGTTTGGAGG
 GATGCTGCAGGTCGAAACTTGGTCTTACGGGAATCTTACGGCAGAGATGACCTTCAAGATCATCGCC
 CTTGACCCATACTACTTCCAGCAGGGCTGGAATATCTTCGACAGCATCATCGTCATCCTCAGCCTCA
 TGGAGCTGGCCGTCTCGCATGGCAACCTGTCTGTGCTGCGTTCCTCCGTCTGCTGCGGGTCTTCAA
 GCTGGCCAAATCATGGCCACCCTGAACACACTCATCAAGATCATCGGAACTCTGTTGGTGCCTGGGG
 AACCTGACCCCTGGTGTGCCATCATCGTCTTCATCTTCGCCGTTGGTGGTATGCAGCTCTTCGGCAAGA
 ACTACTCAGAGCTGAGGCACCGAATCAGCGACTCTGGCCTGTGCCCCGCTGGCAGATGATGGACTTCTT
 CCACGCCCTTCTCATCATCTTCGCATCCTCTGTGGAGAGTGGATCGAGACCATGTGGGACTGCATGGAG
 GTGTCTGGGCAGTCGCTGTGCTTCTGCTGGTCTTCTGCTGGTCAATGGCAACCTTGTGGTCTGA
 ATCTCTTCTTGGCCTTGTGCTCAGTCTTTCAGCGCAGACAACCTCACAGCCCTGACGAGGATGGGGA
 GATGAACAACCTCCAGCTGGCCCTGGCTCGCATCAAAGGGGCCCTTCGCTTGTCAAGCGGACCACTGG
 GACTTCTGCTGCGGGCTCTGCGCGCGGACCTAAGAAGCCCGGGCTCTTGCACCCACAGCCAGCTGC
 CCAGCTGATCGCCGCTCCAGGTCACCCACCCAGAGGTGGAGAAGGCGCCCGCCAGCCCGGAGGA
 AACACGGTTCGAGGAAGACAAGCGCGGCGAGGGCACCCCTGGGGATACCGAGCTGTGTGTGCC
 ATCGCAGTGGCTGAGTCAGACACTGATGACCAGGAAGAGGATGAGGAGAACAGCCTTGGCAGGAGGAGG
 AAGAGTCCAGCAAACAGCAGGAATCCCAAGTGTGTCTGGTGGCCACGAGCCCCCAGGAGCCAGGGC
 CTGGAGCCAGGTGTGAGAGACCACATCCTCTGAAGCCGAGGCCAGTACGTCTCAGGCAGACTGGCAGCAA
 GAGCGGGAAGCGGAGCCCGGGCCCGGGTGCAGTCCGAGGACAGTTACTCCGAGGGTAGCA
 CCGCTGACATGACCAACCCGACACCTCTGGAGCAAATCCAGACCTCGGGGAGGACGTCAAGGACCC
 AGAGGACTGCTTCACTGAAGGCTGCGTCCGACGTTGCTTGTGCTGATGGTGGACAGCAGCAGGCCCA
 GGAAGGTCTGGTGGAGACTGCGCAAGACCTGCTACCGCATAGTGGAGCAGAGCTGGTTCGAGACTTTCA
 TCATCTTCATGATCCTGCTCAGCAGCGGAGCGCTGGCCTTCGAGGACATCTACCTGGAGGAGCGGAAGAC
 CATCAAGGTTCTGCTGGAGTACGCCGACAAGATGTTACATATGTCTTTGTGTTGGAGATGCTGCTCAAG
 TGGGTGGCCTACGGCTTCAAGAAGTACTTCACCAACGCCTGGTGTGGTGGACTTCTAATTGTGGACG
 TCTCACTGGTCAGCCTCGTGGCCAACACCTTAGGCTTTGCCGAGATGGGTCCCATCAAGTCCCTGAGGAC
 ACTGCGTGCATTCGACCCTGAGGGCTTTGTACGATTCGAGGGCATGAGGGTGGTGGTCAACGCGCTG
 GTGGGCGCCATCCCTCCATCATGAATGTCCTCCTCGTCTGCCTCATCTTCTGGTCACTTTCAGCATCA
 TACACCATTGTGAACAACAAGAGCGAGTGTGAGTCTTCAACGTGACTGGAGAGTTGTACTGGACCAAG
 GTGAAAGTCAACTTTGACAACGTGGGGGCTGGGTACCTGGCCCTGCTGCAGGTGGCGACATTTAAAGGCT
 GGATGGACATCATGTATGCGGCTGTGGACTCCAGAGGGTATGAAGAGCAGCCGAGTGGGAGGACAACCT
 CTACATGTACATCTACTTCGTCGCTTTCATCATCTTCGGCTCCTTCTTACCCTCAACCTGTTTATTGGT
 GTCATCATTGATAACTTCAACCAGCAGAAGAAAAGTTAGGGGGCCAGGACATCTTCATGACGGAGGAGC
 AGAAGAAGTACTACAATGCCATGAAGAAGCTGGGCTCAAAGAACCCAGAGCCATCCACAGGCCTCT
 GAACAAGTACCAGGGTTTCATATTCGACATTGTGACCAAGCAGGCCTTCGATGTTACCATCATGTTCCCT
 ATCTGTTTAAACATGGTGACCATGATGGTAGAGACAGATGATCAGAGCCCTGAAAAAGTCAACATCTTGG
 CCAAGATCAACCTGCTCTTCGTGGCCATCTTACAGGAGAGTGTATTGTCAAGATGGCTGCCCTGCGCCA
 CTATTACTTACCAACAGCTGGAACATCTTCGATTTTCGTGGTGTGCATCCTCTCCATCGTTGGCACTGTC
 CTCTCCGACATCATCCAGAAGTACTTCTTCCCCAACGCTCTTCCGTGTGCATCCGTCTGGCCAGGATCG
 GCCGCATCCTCAGGCTGATCCGAGGAGCCAAGGGGATTCGCACGTTGCTCTTCGCCCTCATGATGTCCT
 GCCCGCCCTTCAACATCGGCCCTCCTCTTCTCCTCGTCATGTTTCATCTACTCCATCTTCGGCATGGCC
 AACTTTGCTACGTCAAGTGGGAGGCTGGCATCGACGACATGTTCAACTTCCAGACCTTTGCCAACAGCA

TGCTGTGCCTTTTCCAGATCACCACGTCGGCTGGCTGGGATGGCCTCCTCAGCCCCATCCTCAACACAGG
 ACCCCCCTACTGTGACCCCAACCTGCCAACAGCAATGGCTCCAGGGGAACTGTGGGAGCCAGCAGTG
 GGCATCCTCTTCCACCACCTACATCATCTCCTTCTCATCGTGGTCAACATGTACATTGCCATCA
 TCCTGGAGAACTCAGTGTGGCCACAGAAGAGACACAGAGCCCCGAGCGAGGATGACTTCGACATGTT
 CTATGAGATCTGGGAGAAGTTCGACCCGGAGGCCACCCAGTTCATTGAGTATTTGGCCCTGTCCGACTTT
 GCCGATGCCCTGTCTGAGCCACTCCGCATCGCCAAGCCCAACAGATAAGCCTCATCAATATGGACCTGC
 CCATGGTGAAGGGGACCCGATCCACTGTATGGACATCCTGTTGCGCTTACCAAGAGGGTGTCTGGGGA
 GTCTGGGAGATGGATGCCCTGAAGATCCAGATGGAGGAGAAATTCATGGCGGCCAATCCTTCCAAGATC
 TCCTATGAGCCATCACCACCACCTGCGGCGAAAACATGAGGAGGTGTGGGCCACGGTCTCCAGCGGG
 CCTTCCGAGGCACCTCCTGCAGCGCTCGGTGAAGCATGCTTCTTCTTCCGCCAGCAAGCGGGCAG
 CAGTGGCCTCTCTGATGAGGATGCCCCGAGCGAGAGGGACTCATTGCCTACATGATGAATGAGAACTTC
 TCCCGCGCAGCGGTCCCTCTCCAGCTTCCATCTCCTCCACGCTCTTCCACCGTCTATGACAGCG
 TCAGGAGGCCACCAGTGATAACCTCCCAGTGCCTGCGTGGACTACAGCCGAGCGAAGATCTTGAGA
 CTTCCCTCATCTCCAGATAGGGACCGAGAGTCTATAGT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>MR222902 representing NM_021544
 Red=Cloning site Green=Tags(s)

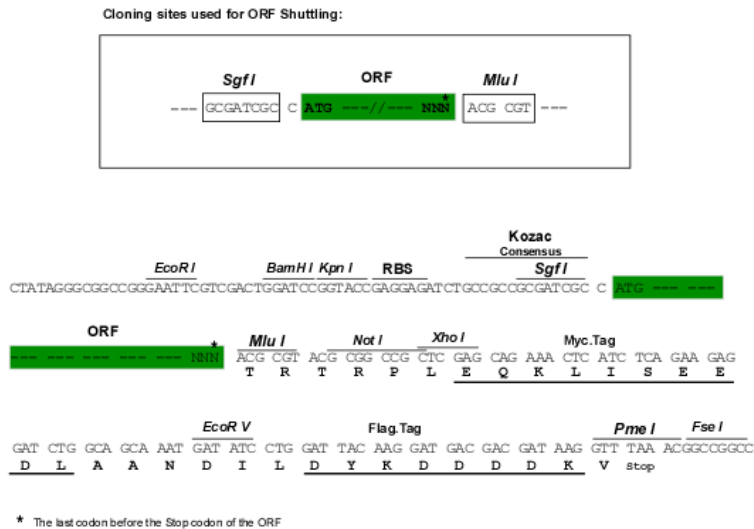
MANFLLPRGTSSFRFTRESLAAIEKRMAEKQARGSATSQESREGLPEEEAPRPQLDLQASKKLPDLYGN
 PPRELIGEPLEDLPFYSTQKTFIVLNKGTIFRFSATNALYVLSFHPVRRRAAVKILVHLSLSMLIMCT
 ILTNCVMAQHDPWPWKYVEYFTAIYTFESLVKILARGFCLHAFTFLRDPWNWLDVSVVIMAYYSENI
 KLGNSLSALRTRFVLRALKTISVIPGLKTIIVGALIQSVKKLADVMVLTVFCLSVFALIGLQLFMGNLRHKC
 VRNFTELNGTNGSVEADGIVWNSLDVYLNDPANYLLKNGTTDVLVLCGNSSDAGTCEGYRCLKAGENPDH
 GYTSFDSFAWFLALFRLMTQDCWERLYQQLRSAGKIYMIFFMLVIFLGSFYLVNLI LAVVAMAYEEQN
 QATIAETEEKEKRFQEAEMEMLKKEHEALTIRGVDTVSRSSLEMSPLAPVNHERRSKRRKRLSSGTEDGG
 DDRLPKSDSEDPALNQLSLTHGLSRTSMRPRSSRGSIFTFRRRDQGEADFADDENSTAGESESHRTS
 LLVPWPLRRPSTQGPFGTAPGHVNLNGKRNSVDCNGVVSLLGAGDAEATSPGSHLLRPVLDLRRPDT
 TTPSEEPGQMLTPQAPCADGFEEPGARQALSAVSVLTSALEELEEESHRKCPWCWNRFAQHLYIWECC
 PLWMSIKQVKVVMDFADLTIITMCIVLNTLFMALEHYNMTAEFEMLQVGNLVFTGIFTAEMTFKIIA
 LDPYYFQQGNIFDSIIIVILSLMELGLSRMGNLSVLRFSRLLRVFKLAKSWPTLNTLIIKIGNSVGLG
 NLTLVLAIIIVFIFAVVGMQLFGKNYSELRHRISDSGLLPRWHMMDFFHAFIIIFRILCGEWIETMWDCE
 VSGQSLCLLVFLVMVIGNLVVNLFLALLSSFSADNL TAPDEDGEMNNLQLALARIQGLRFVKRTTW
 DFCCGLLRRRPKPAALATHSQLPSCIAAPRSPPPPEVEKAPPARKETRFEEKRPQGTGPTDTEPVCVP
 IAVAESDQDEEENSLGTEEESSKQESQVVS GGHEPPQEPRAWSQVSETTSSEAEASTSQADWQQ
 EREAEPRAPGCGETPEDSYSEGSTADMTNTADLLEQIPDLGEDVDPEDCFTEGCVRRPCCMVDTTQAP
 GKVWVRLRKYRIVEHWFETFIIFMILLSGALAFEDIYLEERKTIKVLLEYADKMFTYVFLVLEMLLK
 WVAYGFKYFTNAWCWLDLIVDVSLVSLVANTLGAEMGPIKSLRTRLRRLRPLRALSRFEGMRVVNAL
 VGAIPIIMNVLLVCLIFWLIFSIMGVNLFAGKFGRCINQTEGDLPLNYTIVNNKSECESFNVTGELYWTK
 VKVNFNDVAGYLAALLQVATFKGWMDIMYAAVDSRGYEEQPQWEDNLYMYIYFVVFIIIFGSFFTLNLFIG
 VIIDNFNQKKKLGQDIFMTEEQKYYNAMKKGSKKPQKPIPRPLNKYQGFIFDIVTKQAFDVTIMFL
 ICLNMVTMMVETDDQSPEKVNILAKINLLFVAIFTGECIVKMAALRHYYFTNSWNIFDFVIVLSIVGTV
 LSDIIQKYFFSPTLFRVIRLARIGRILRLIRGAKGIRTLFALMMSLPALFNIGLLLFLVMFIYSIFGMA
 NFAVYKWEAGIDDMFNQTFANSMCLFQITTSAGWDGLLSPILNTGPPYCDPNLPSNGSRGNCGSPAV
 GILFFTTYIIISFLIVVMYIAIILENFVSATEESTEPLSEDDFDMFYEIWEKFDPEATQFIEYLALSDF
 ADALSEPLRIAKPNQISLINMDLPMVSGDRIHCM DILFAFTKRVLGESEMDALKIQMEEKFMAANPSKI
 SYEPITTTLRRKHHEVSATVIQRAFRRHLLQRSVKHASFLFRQQAGSSGLSDEDAPEREGLIAYMMNENF
 SRRSGPLSSSSISSTSFPPSYDSVTRATSDNLPVRASDYSRSEDLADFPSPDRDRESIV

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mm9011_a03.zip

Restriction Sites: Sgfl-MluI

Cloning Scheme:



ACCN: NM_021544

ORF Size: 6060 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_021544.4](#), [NP_067519.2](#)

RefSeq Size: 8452 bp

RefSeq ORF: 6063 bp

Locus ID: 20271

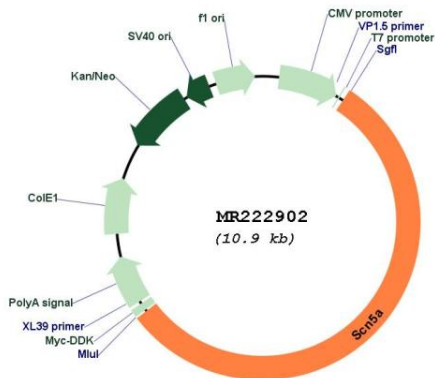
UniProt ID: [Q9JIV9](#)

Cytogenetics: 9 71.33 cM

MW: 228.2 kDa

Gene Summary: This protein mediates the voltage-dependent sodium ion permeability of excitable membranes. Assuming opened or closed conformations in response to the voltage difference across the membrane, the protein forms a sodium-selective channel through which Na(+) ions may pass in accordance with their electrochemical gradient (PubMed:11834499, PubMed:23420830). It is a tetrodotoxin-resistant Na(+) channel isoform. This channel is responsible for the initial upstroke of the action potential. Channel inactivation is regulated by intracellular calcium levels (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR222902