

Product datasheet for MC224899

Nalcn (NM_177393) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Nalcn (NM_177393) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Nalcn
Synonyms:	A530023G15Rik; AI849508; Vgcnl1
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
Fully Sequenced ORF:	>MC224899 representing NM_177393 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGCTCAAAGAAAGCAGAGTTCAGGGTGAAGCCAGCCAGTTACTGACTTTGGTCTGATGAATCTC
TGTCAGACAATGCTGACATACTGGATTAATAAGCCATGGGTGCACTCTCTGCTGCGCATCTGTGCCAT
CATCAGCGTCATCTCAGTGTGCATGAACACACCTATGACCTTTGAGCACTATCCTCCTCTCAGTATGTG
ACCTTCACCTTGGACACTTTATTGATGTTCTCTACACTGCAGAAATGATAGCAAAGATGCACATACGGG
GAATTGTCAAGGGTGATAGCTCCTATGTGAAGGATCGCTGGTGTGTTTTGATGGATTATGGTCTTTTTG
CCTTTGGGTATCTCTTGTGTACAGGTGTTGAAATAGCTGACATAGTTGATCAGATGTCACCTTGGGGC
ATGCTGCGGATCCACGGCCACTCATTATGATCCGGGCTTTCAGGATTTATTTCCGATTCGAACTGCCAA
GGACAAGAATTACAAACATTTAAAGCGGTGAGGAGAACAAATATGGAGTGTTCATTTTCTCCTTTTT
CTTCTTCTTCTGTATGGGATTTTAGGAGTTCAAATGTTTGAACATTTACCTACCACTGTGTAGTCAAT
GACACAAAGCCAGGAAATGTAACCTGGAATAGCTTAGCTATTCCAGATACGCACTGCTCCCAGAGCTAG
AAGAAGGCTATCAATGCCCGCCAGGATTTAAATGCATGGACCTGGAAGACCTGGGACTTAGCAGGCAAGA
GCTGGGCTACAGTGGCTTAAATGAGATAGGCACGAGTATATTCACAGTCTATGAGGCTTCATCTCAGGAA
GGCTGGGTATTCCTCATGTACAGAGCAATCGACAGCTTTCCCGCTGGCGCTCCTACTTCTACTTCATCA
CACTGATTTTCTTCTTGGCTTGTCAAGAATGTGTTATTGCTGTCATCATTGAGACATTTGCAGA
AATCAGAGTACAATTTCAACAAATGTGGGAACTCGGAGCAGCACAATTTCTACAGCCACCACACAGATG
TTCCATGAAGATGCCGCTGGTGGTTGGCAGCTGGTAGCTGTGGATGTCAACAAGCCCGGGACGTGCC
CAGCCTGCCTACAGAAAATGATGCGGTCATCGGTTTTCCACATGTTTATCCTGAGCATGGTACTGTGGA
TGTAATAGTTGCTGCCAGCAATTACTACAAGGGAGAGAACTTCAGAAGGCAGTATGATGAATTTACCTT
GCAGAGGTGGCTTTTACAGTCTTTTCGACCTGGAAGCACTCCTGAAGATATGGTGTGGGGTTTACTG
GCTACATCAGCTCATCTCCACAAGTTTGAAGTATTGCTTGTATTGGGACGACGCTTCATGTGTACCC
AGATCTTTATCATTCTCAGTTCACATACTTCCAGTTCGCGGAGTCCGGCTTATTAAGATTTCCCA
GCATTGGAAGACTTTGTGTACAAGATATTTGGTCTGGGAAAAAAGCTTGAAGCTTGGTGGTGTCTACTG



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CCAGCCTCCTGATAGTTATGTCAGCCATCAGTTTGCAGATGTTCTGTTTTGTCGAAGAACTGGACAGATT
 CACCACTTTTCCAAGGCATTTATGCTATGTTCCAGATCCTCACCCAGGAAGGATGGTGGATGTGATG
 GATCAGACTCTGAATGCTGTGGGCATATGTGGGCACCACTGGTTGCCATCTATTTATCCTCTATCATC
 TCTTTGCAACTTTGATCCTCCTGAGTTTGTGGTGTGTTATTTGGACAACTAGAACTTGATGAAGA
 TCTAAAGAAGCTCAAACAACTAAAGCAAAGTGAAGCGAACGCGGACCAAAAGAAAACTCCCTTTGCGC
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 AACTAAGACCTGGAGAGAAAAAACCCTGGATTTGGGTGCCCGTGTGGGCAAACTCCTCGAACTTTAA
 CTTGACAATGTGGGAAATGCCATGCTGGCATTATTTGAAGTTCTGCTTGAAGGCTGGGTAGAAGTG
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 GCTGACGGTAGATCAGAGACGATGGGAAGATCTCAAGAGCAGACTGAAGATCGCACAGCCTTTCATCTC
 CCTCCTCGGCCGATAATGATGGTTTTAGAGCTAAAATGTATGACATAACCCAGCATCCATTTTTAAGA
 GGACAATTGCATTGCTGGTCTGGCCAGTCTGTGTTGCTATCTGTCAAGTGGGATGTTGACGATCCTGT
 GACGGTTCCTTTGGCAACAATGTCAGTTGTCTTACCTTCATCTTTGCTTAGAGGTTACATGAAGATT
 ATAGCAATGTCACCAGCTGGATTCTGGCAAAGCAGAAGAAACCGATATGATCTCTTGGTGACATCTCTTG
 GTGTTGTGTTGGTGGTGTCCATTTTGTCTGTGAATGCATACACCTACATGATGGGAGCCTGCCTGAT
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 AGCATGTACAAGAGCTTTTTATCATCGTAGGAATGTTTCTTCTGCTGTGCTATGCCTTTGCTGGAG
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 TTATGTACTTCTGCTCATTCTATGTCATCATTGCCTACATCATGCTGAATCTGCTTGTAGCCATAATTGT
 GGAGAATTTCTTTGTTTTATTCCACTGAAGAGGACCAGCTTTTGGATTACAATGATCTTCGCCATTTT
 CAAATCATATGGAACATGGTAGATGATAAAAGAGAGGGTGTGATCCCACTTTCCGAGTGAAGTTCTCTGC
 TACGGCTGCTGCTGGGAGGCTGGAAGTGGATCTTGATAAAGACAAGCTCCTGTTAAGCATATGTGCTA
 TGAGATGGAGAGGCTGCACAATGGTGGTGTGTCACCTTCCATGATGCTTAAGCATGCTCTCTATCGC
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 AGGAGGAGGTGGTAAGCAGACTATTGTCATGTGGCTGAAGAAGTCTTAAACGCATCCGGGCTAAACA
 ACAGCAGTCGTGCAGCATCATCCACAGCCTGAGAGAGAGCCAGGAGCAAGAGCGGAGCCGGCTATTCCTG
 AATCCTCCAGCATTGAGACCACCCAGCCAAGTGAAGGACAGCAACGCCAAGCCAGCCAGGACCACAGTATGC
 AACCTGAGACAAGCAGTACGAGCAGCTCTTAAGCCCTACTCTGTGACAGAGGAGGAAGCCGACAGGA
 TGCAGCAGATACTGAAAAACCCAAAGGAAGATTGGGCAATGGCGTCTGCCCTCAGCCCCAAACCAATA
 AGCCATTCTGTATCTTCGGTTAACCTACGGTTTGGAGGAAGGACAACGATGAAGACTGTGGTGTGCAAGA
 TGAACCCATGCCAGACACAGCTTCTGTGGCTCTGAAGTTAAAAAGTGGTGGACCAGACAGCTGACCGT

GGAGAGTGACGAGAGTGGAGATGACCTCCTGGATATTAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites:	Sgfl-MluI
ACCN:	NM_177393
Insert Size:	5220 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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:	<ol style="list-style-type: none">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:	<u>NM_177393.4</u> , <u>NP_796367.3</u>
RefSeq Size:	7115 bp
RefSeq ORF:	5220 bp
Locus ID:	338370
UniProt ID:	<u>Q8BXR5</u>
Cytogenetics:	14 E5
Gene Summary:	Voltage-independent, cation-nonspecific channel which is permeable to sodium, potassium and calcium ions (PubMed:17448995). Regulates the resting membrane potential and controls neuronal excitability. Neuropeptides such as neurotensin and substance P (SP) stimulate the firing of action potentials by activating NALCN through a SRC family kinases-dependent pathway (PubMed:19092807). In addition to its baseline activity, NALCN activity is enhanced/modulated by several GPCRs (PubMed:19092807, PubMed:19575010, PubMed:21040849). Required for normal respiratory rhythm and neonatal survival. Involved in systemic osmoregulation by controlling the serum sodium concentration (PubMed:21177381). NALCN is partly responsible for the substance P-induced depolarization and regulation of the intestinal pace-making activity in the interstitial cells of Cajal (PubMed:22508057). Plays a critical role in both maintenance of spontaneous firing of substantia nigra pars reticulata (SNr) neurons and physiological modulation of SNr neuron excitability (PubMed:27177420).[UniProtKB/Swiss-Prot Function]