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Product datasheet for SC309141

VGCNL1 (NALCN) (NM_052867) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	VGCNL1 (NALCN) (NM_052867) Human Untagged Clone
Tag:	Tag Free
Symbol:	NALCN
Synonyms:	bA430M15.1; CanIon; CLIFAHDD; IHPRF; IHPRF1; INNFD; VGCNL1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_052867, the custom clone sequence may differ by one or more nucleotides

ATGCTCAAAAGGAAGCAGAGTTCCAGGGTGGAAGCCCAGCCAGTCACTGACTTTGGTCCTGATGAGTCTC
TGTCGGATAATGCTGACATCCTCTGGATTAACAAACCATGGGTTCACTCTTTGCTGCGCATCTGTGCCAT
CATCAGCGTCATTTCTGTTTGTATGAATACGCCAATGACCTTCGAGCACTATCCTCCACTTCAGTATGTG
ACCTTCACTTTGGATACATTATTGATGTTTCTCTACACGGCAGAGATGATAGCAAAAATGCACATCCGGG
GCATTGTCAAGGGGGATAGTTCCTATGTGAAAGATCGCTGGTGTGTTTTTGATGGATTTATGGTCTTTTG
CCTTTGGGTTTCTTTGGTGCTACAGGTGTTTGAAATTGCTGATATAGTTGATCAGATGTCACCTTGGGGC
ATGTTGCGGATTCCACGGCCACTGATTATGATCCGAGCATTCCGGATTTATTTCCGATTTGAACTGCCAA
GGACCAGAATTACAAATATTTTAAAGCGATCGGGAGAACAAATATGGAGTGTTTCCATTTTTCTACTTTT
CTTTCTACTTCTTTATGGAATTTTAGGAGTTCAGATGTTTGGAACATTTACTTATCACTGTGTTGTAAAT
GACACAAAGCCAGGGAATGTAACCTGGAATAGTTTAGCTATTCCAGACACACACTGCTCACCAGAGCTAG
AAGAAGGCTACCAGTGCCCACCTGGATTTAAATGCATGGACCTTGAAGATCTGGGACTTAGCAGGCAAGA
GCTGGGCTACAGTGGCTTTAATGAGATAGGAACTAGTATATTCACCGTCTATGAGGCCGCCTCACAGGAA
GGCTGGGTGTTCCTCATGTACAGAGCAATTGACAGCTTTCCCCGTTGGCGTTCCTACTTCTATTTCATCA
CTCTCATTTTCTTCCTCGCCTGGCTTGTGAAGAACGTGTTTATTGCTGTTATCATTGAAACATTTGCAGA
AATCAGAGTACAGTTTCAACAAATGTGGGGATCGAGAAGCAGCACTACCTCAACAGCCACCACCCAGATG
TTTCATGAAGATGCTGCTGGAGGTTGGCAGCTGGTAGCTGTGGATGTCAACAAGCCCCAGGGACGCGCCC
CAGCCTGCCTCCAGAAAATGATGCGGTCATCCGTTTTCCACATGTTCATCCTGAGCATGGTGACCGTGGA
CGTGATCGTGGCGGCTAGCAACTACTACAAAGGAGAAAACTTCAGGAGGCAGTACGACGAGTTCTACCTG
GCGGAGGTGGCTTTTACAGTACTTTTTGATTTGGAAGCACTTCTGAAGATATGGTGTTTGGGATTTACTG
GATATATTAGCTCATCTCTCCACAAATTCGAACTACTACTCGTAATTGGAACTACTCTTCATGTATACCC
AGATCTTTATCATTCACAATTCACGTACTTTCAGGTTCTCCGAGTAGTTCGGCTGATTAAGATTTCACCT
GCATTAGAAGACTTTGTGTACAAGATATTTGGTCCTGGAAAAAAGCTTGGGAGTTTGGTTGTATTTACTG
CCAGCCTCTTGATTGTTATGTCAGCAATTAGTTTGCAGATGTTCTGCTTTGTCGAAGAACTGGACAGATT

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TACTACGTTTCCGAGGGCATTTATGTCCATGTTCCAGATCCTCACCCAGGAAGGATGGGTGGACGTAATG
GACCAAACTCTAAATGCTGTGGGACATATGTGGGCACCCGTGGTTGCCATCTATTTCATTCTCTATCATC
TTTTTGCCACTCTGATCCTCCTGAGTTTGTTTGTTGCTGTTATTTTGGACAACTTAGAACTTGATGAAGA
CCTAAAGAAGCTTAAACAATTAAAGCAAAGTGAAGCAAATGCGGACACCAAAGAAAAGCTCCCTTTACGC
CTGCGAATCTTTGAAAAATTTCCAAACAGACCTCAAATGGTGAAAATCTCAAAGCTTCCTTCAGATTTTA
CAGTTCCTAAAATCAGGGAGAGTTTTATGAAGCAGTTTATTGACCGCCAGCAACAGGACACATGTTGCCT
CCTGAGAAGCCTCCCGACCACCTCTTCCTCCTCCTGCGACCACTCCAAACGCTCAGCAATTGAGGACAAC
AAATACATCGACCAAAAACTTCGCAAGTCTGTTTTCAGCATCAGGGCAAGGAACCTTCTGGAAAAGGAGA
CCGCAGTCACTAAAATCTTAAGAGCTTGCACCCGACAGCGCATGCTGAGCGGATCATTTGAGGGGCAGCC
CGCAAAGGAGAGGTCAATCCTCAGCGTGCAGCATCATATCCGCCAAGAGCGCAGGTCACTAAGACATGGA
TCAAACAGCCAGAGGATCAGCAGGGGAAAATCTCTTGAAACTTTGACTCAAGATCATTCCAATACAGTGA
GATATAGAAATGCACAAAGAGAAGACAGTGAAATAAAGATGATTCAGGAAAAAAAGGAGCAAGCAGAGAT
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ACCCTGTCACAGGAGCTGTGAAAAATACAAAGTACCATCAACTTTATGATTTGCTGGGATTGGTCACTTA
CCTGGACTGGGTCATGATCATCGTAACCATCTGCTCTTGCATTTCCATGATGTTTGAGTCCCCGTTTCGA
AGAGTCATGCATGCACCTACTTTGCAGATTGCTGAGTATGTGTTTGTGATATTCATGAGCATTGAGCTTA
ATCTGAAGATTATGGCAGATGGCTTATTTTTCACTCCAACTGCTGTCATCAGGGACTTCGGTGGAGTAAT
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GGAGCTCAGCTTCTAATGGTCCTTCGGTGCCTGAGACCTCTGCGCATATTCAAACTGGTGCCCCAGATGA
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AATGCTCGTTTTTGCAAGCTTTGGAGTTCAGCTTTTTGCTGGAAAACTGGCCAAGTGCAATGATCCCAAC
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AATTGAGGCCTGGAGAGAAAAAACCTGGATTTTGGGTGCCCCGTGTTTGGGCGAATCCTCGGAACTTTAA
TTTCGACAATGTGGGAAACGCTATGCTGGCGTTGTTTGAAGTTCTCTCCTTGAAAGGCTGGGTGGAAGTG
AGAGATGTTATTATTCATCGTGTGGGGCCGATCCATGGAATCTATATTCATGTTTTTGTATTCCTGGGTT
GCATGATTGGACTGACCCTTTTTGTTGGAGTAGTTATTGCTAATTTCAATGAAAACAAGGGGACGGCTTT
GCTGACCGTCGATCAGAGAAGATGGGAAGACCTGAAGAGCCGACTGAAGATCGCACAGCCTCTTCATCTT
CCGCCTCGCCCGGATAATGATGGTTTTAGAGCTAAAATGTATGACATAACCCAGCATCCATTTTTTAAGA
GGACAATCGCATTACTCGTCCTGGCCCAGTCGGTGTTGCTCTCTGTCAAGTGGGACGTCGAGGACCCGGT
GACCGTACCTTTGGCAACAATGTCAGTTGTTTTCACCTTCATCTTTGTTCTGGAGGTTACCATGAAGATC
ATAGCAATGTCGCCTGCTGGCTTCTGGCAAAGCAGAAGAAACCGATACGATCTCCTGGTGACGTCGCTTG
GCGTTGTATGGGTGGTGCTTCACTTTGCCCTCCTGAATGCATATACTTACATGATGGGCGCTTGTGTGAT
TGTATTTAGGTTTTTCTCCATCTGTGGAAAACATGTAACGCTAAAGATGCTCCTCTTGACAGTGGTCGTC
AGCATGTACAAGAGCTTCTTTATCATAGTAGGCATGTTTCTCTTGCTGCTGTGTTACGCTTTTGCTGGAG
TTGTTTTATTTGGTACTGTGAAATATGGGGAGAATATTAACAGGCATGCAAATTTTTCTTCGGCTGGAAA
AGCTATTACCGTACTGTTCCGAATTGTCACAGGTGAAGACTGGAACAAGATTATGCATGACTGTATGGTT
CAGCCTCCGTTTTGTACTCCAGATGAATTTACATACTGGGCAACAGACTGTGGAAATTATGCTGGGGCAC
TTATGTATTTCTGTTCATTTTATGTCATCATTGCCTACATCATGCTAAATCTGCTTGTAGCCATAATTGT
GGAGAATTTCTCCTTGTTTTATTCCACTGAGGAGGACCAGCTTTTAAGTTACAATGATCTTCGCCACTTT
CAAATAATATGGAACATGGTGGATGATAAAAGAGAGGGGGTGATCCCCACGTTCCGCGTCAAGTTCCTGC
TGCGGCTACTGCGTGGGAGGCTGGAGGTGGACCTGGACAAGGACAAGCTCCTGTTTAAGCACATGTGCTA
CGAAATGGAGAGGCTCCACAATGGCGGCGACGTCACCTTCCATGATGTCCTGAGCATGCTTTCATACCGG
TCCGTGGACATCCGGAAGAGCTTGCAGCTGGAGGAACTCCTGGCGAGGGAGCAGCTGGAGTACACCATAG
AGGAGGAGGTGGCCAAGCAGACCATCCGCATGTGGCTCAAGAAGTGCCTGAAGCGCATCAGAGCTAAACA
GCAGCAGTCGTGCAGTATCATCCACAGCCTGAGAGAGAGTCAGCAGCAAGAGCTGAGCCGGTTTCTGAAC
CCGCCCAGCATCGAGACCACCCAGCCCAGTGAGGACACGAATGCCAACAGTCAGGACAACAGCATGCAAC
CTGAGACAAGCAGCCAGCAGCAGCTCCTGAGCCCCACGCTGTCGGATCGAGGAGGAAGTCGGCAAGATGC
AGCCGACGCAGGGAAACCCCAGAGGAAATTTGGGCAGTGGCGTCTGCCCTCAGCCCCAAAACCAATAAGC
CATTCAGTGTCCTCAGTCAACTTACGGTTTGGAGGAAGGACAACCATGAAATCTGTCGTGTGCAAAATGA
ACCCCATGACTGACGCGGCTTCCTGCGGTTCTGAAGTTAAGAAGTGGTGGACCCGGCAGCTGACTGTGGA
GAGCGACGAAAGTGGGGATGACCTTCTGGATATTTAG

Restriction Sites:	Please inquire
ACCN:	NM_052867
Insert Size:	7000 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
OTI Annotation:	This clone may be unstable or toxic at high copy number in common E. coli strain. We recommend using a lower copy number E. coli strain, such as CopyCutter strain (http://www.epibio.com/item.asp?ID=435) for transformation and plasmid preparation. Please be aware that the DNA yield could be low. Additional aliquots of this clone can be ordered from OriGene.
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_052867.1, NP_443099.1
RefSeq Size:	5347 bp
RefSeq ORF:	5217 bp
Locus ID:	259232
UniProt ID:	Q8IZF0
Cytogenetics:	13q32.3-q33.1
Domains:	ion_trans
Protein Families:	Druggable Genome, Transmembrane

Gene Summary:

This gene encodes a voltage-independent, nonselective cation channel which belongs to a family of voltage-gated sodium and calcium channels that regulates the resting membrane potential and excitability of neurons. This family is expressed throughout the nervous system and conducts a persistent sodium leak current that contributes to tonic neuronal excitability. The encoded protein forms a channelosome complex that includes G-protein-coupled receptors, UNC-79, UNC-80, NCA localization factor-1, and src family tyrosine kinases. Naturally occurring mutations in this gene are associated with infantile neuroaxonal dystrophy, infantile hypotonia with psychomotor retardation and characteristic facies (IHPRF) syndrome, and congenital contractures of the limbs and face with hypotonia and developmental delay (CLIFAHDD) syndrome. A knockout of the orthologous gene in mice results in paralysis with a severely disrupted respiratory rhythm, and lethality within 24 hours after birth. [provided by RefSeq, Apr 2017]
Transcript Variant: This variant (2) lacks an alternate exon in the 5' coding region but maintains the reading frame, compared to variant 1. The encoded isoform (2) is shorter than isoform 1. Both variants 2 and 3 encode the same isoform (2).