

Product datasheet for **MG219511**

Nrcam (NM_176930) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Nrcam (NM_176930) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Nrcam
Synonyms:	Bravo; C030017F07Rik; C130076O07Rik; mKIAA0343
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG219511 representing NM_176930 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCAGCTTAAAATAATGCCGAAGAAGAAGCACTTATCTGCAGGCGGAGTGCCCTGATTCTTCTCTGT
GCCAGATGATCAGCGCGCTGGATGTTCTCTCGATCTGGTACAACCTCCAACCATCACTCAACAGTCACC
AAAAGACTACATCATTGACCCTCGGAGAATATTGTAATCCAGTGTGAGGCCAAAGGAAACCTCCCCA
AGCTTTTCTGGACTCGTAATGGAACCTCTTACATAGACAAGGACCCTCTGGTCACCATGAAGCCTG
GCTCAGGAACCCTTGTCATCAACATCATGAGTGAGGGGAAGGCAGAGACCTATGAAGGAGTCTACCAGT
CACTGCAAGGAACGAGCGTGGAGCTGCCGTCTCCAATAACATTGTTGTCCGCCATCTAGGTCACCCTTG
TGGACCAAGGAAAGACTTGAACCTATAGTACTCCAGAATGGGCAGTCATTAGTACTTCCATGTAGGCCTC
CGATTGGATTACCTCCGGCCATAATATTTTGGATGGATAATTCCTTTCCAGAGACTTCCACAGAGTGAGCG
GGTTTCCCAAGGCCTAAATGGAGACCTTACTTCTCCAATGTCTCCAGAGGACACCCGTGAGGACTAT
ATCTGCTATGCCAGATTTAATCACACTCAAACCATCCAGCAGAAGCAGCCTATTTCTTTGAAGGTGATTT
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GTGCTTTTCGCTGGAGTGCAATGCGGAAGGCCTACCTACTCCAATTTACTGGATCAAAGAAGACGGAA
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GTTAAAGCGGCTCCCTACTGGATCGTGGCACCTCAAACCTCGTGCTTTCCCGGAGAGAATGGGACCC
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AGTGCGGTTTATCAGTGCATGCCTCTAACAAATATGGATATTTACTAGCAAATGCATTTGTAATGTTT
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GCTAGATTGTGCCTTCTTTGGATCTCCTATGCCTACCATTGAGTGGTTTAAAGGCACTAAAGGAAGCGCT



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CTTCATGAAGACATTTATGTTTTGCATGATAATGGAACATTAGAAATCCCGTGGCCCAAAAGGATAGTA
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 AGAGGAAATGAAAGCTCAGAGGCCCTTCTCCTGTCAACGCAATGAACTCCTTTGTT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG219511 representing NM_176930
 Red=Cloning site Green=Tags(s)

MQLKIMPKKKHL SAGGVPLILFLCQMISALDVPLDLVQPPTITQQSPKDYIIDPRENIVIQCEAKGKPPP
 SFSWTRNGTHFDIDKDLVTMPGSGTLVINIMSEGKAETYEYVYQCTARNERGAAVSNNIVRPSRSP
 WTKERLEPIVLQNGQSLVPCRPPIGLPPAIIIFWMDNSFQRLPQSERSVQGLNGDLYFSNVLPEdTREY
 ICYARFNHTQTIQQKQPI SLKVISVDELNDTIAANLSDTEFYGAKSSKERPPFTLPEGNESHKEELRGN
 VLSLECIAEGLPTPIIYWIKEGMLPANRTFYRNFKKTQLITHVSEADSGNYQCI AKNALGAVHHTISVT
 VKAAPYWI VAPQNLVLSPGENGLICRANGNPKPRISWL TNGVPIEIALDDPSRKIDGDTIIFSNVQESS
 SAVYQCNASNKYGYLLANAFVNVLAEPRIILTSANTLYQVIANRPAALDCAFFGSPMPTIEWFKGTGKSA
 LHEDIYVLHDNGTLEIPVAQKDSTGYTVCARNKLGMAKNEVHLEIKDPTRIIKQPEYAVVQRGSKVSFE
 CRVKHDHTLIPTIMWLKDNELPNDERFSTDKDHLVSDVKDDGGTYTCTANTLDSASASAVLRVVP
 TPTPAPIYDVPNPPFDLEL TNQLDKSVQLTWTGDDNNSPITKFIIEYEDAMHDAGLWRHQAEVSGTQT
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 GPGLQYKVSWRQKDGDEWTSVVVANVSKYIVSGTPTFPYLIKVQALNDVGF APEPAAVMGHSGEDLPM
 VAPGNVRSVVNSTLAEVHWDPVPPKSVRGHLQGYRIYYWKTQSSSKRNRRIEIKILTFQGTKTHGMLP
 GLQPYSHYALNVRVYNGKGEPASTRDRGFHTPEGVPSAPSSKIVNPTLDSL TLEWDPSPHPNGILTEYI
 LQYQPINSTHELGPLVDLKIPANKTRWTLKLNLFSTRYKFYFYAQT SVGPGSQITEEAITTVDEAGIPPP
 DVGAGKKEEWRKEIVNGSRSFFGLKGLMPGTAYKVRVGAEGDSGFVSSDEDVFETGPAMASRQVDIATQG
 WFI GLMCAVALL ILLIVCFIRRNKGGKYPVKEKEDAHADPEIQPMKEDDGTGFEYSDAEDHKPLKKG
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TRTRPLE - GFP Tag - V

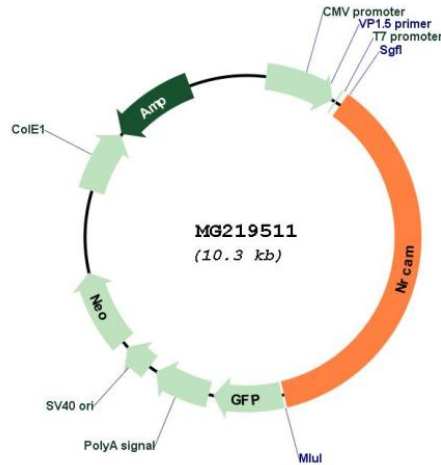
Restriction Sites:

SgfI-MluI

Cloning Scheme:



Plasmid Map:



ACCN: NM_176930

ORF Size: 3768 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_176930.4](#), [NP_795904.3](#)

RefSeq Size: 7572 bp

RefSeq ORF: 3771 bp

Locus ID: 319504

UniProt ID: [Q810U4](#)

Cytogenetics: 12 20.71 cM

Gene Summary: Cell adhesion protein that is required for normal responses to cell-cell contacts in brain and in the peripheral nervous system. Plays a role in neurite outgrowth in response to contactin binding (PubMed:11564762). Plays a role in mediating cell-cell contacts between Schwann cells and axons (PubMed:20188654). Plays a role in the formation and maintenance of the nodes of Ranvier on myelinated axons. Nodes of Ranvier contain clustered sodium channels that are crucial for the saltatory propagation of action potentials along myelinated axons. During development, nodes of Ranvier are formed by the fusion of two heminodes. Required for normal clustering of sodium channels at heminodes; not required for the formation of mature nodes with normal sodium channel clusters (PubMed:14602817, PubMed:20188654). Required, together with GLDN, for maintaining NFASC and sodium channel clusters at mature nodes of Ranvier (PubMed:24719088).[UniProtKB/Swiss-Prot Function]