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Product datasheet for MC224986

Agrn (NM_021604) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Agrn (NM_021604) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Agrn
Synonyms:	Agrin; nmf380
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Cell Selection:	Neomycin
Fully Sequenced ORF:	>MC224986 representing NM_021604 Red=Cloning site Blue=ORF CTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCCGCCGCGATCGCCGGCGC GCCC ATGGTCCGCCCGCGGCTGAGCTTCCCGGCCCCGCTGCTGCCGCTGCTGCTGCTCCTGGCGGCGGCCGCGC CAGCCGTGCCGGGCGCCAGCGGGACGTGCCCGGAGCGCGCCTTGGAGCGGCGCGAGGAGGAGGCGAACGT GGTGCTCACCGGCACAGTGGAGGAGATCCTCAACGTGGACCCGGTGCAGCACACCTACTCCTGCAAGGTT CGAGTGTGGCGGTACTTGAAAGGCAAAGATGTGGTGGCCCAAGAGAGCCTGCTGGATGGTGGCAACAAGG TGGTAATTGGTGGCTTTGGAGACCCCCTCATCTGCGACAACCAGGTGTCCACCGGGGACACTAGAATCTT CTTTGTGAACCCAGCACCACCCTACCTGTGGCCAGCCCACAAGAATGAGTTGATGCTCAACTCCAGCCTT ATGCGGATCACTTTGCGGAACCTGGAAGAGGTGGAGTTCTGTGTAGAAGACAAACCTGGGATCCACTTCA CAGCAGCGCCTTCTATGCCTCCTGATGTGTGCAGGGGAATGTTATGTGGCTTTGGTGCTGTGTGTGAACC TAGTGTTGAGGATCCAGGCCGGGCCTCCTGTGTGTGCAAGAAGAATGTCTGCCCTGCTATGGTAGCTCCT GTGTGTGGCTCAGATGCTTCCACCTATAGCAACGAGTGTGAGCTACAGCGTGCACAGTGCAACCAGCAAC GGCGCATCCGCCTACTCCGCCAAGGGCCATGTGGGTCCCGGGACCCCTGTGCCAATGTGACCTGCAGTTT CGGTAGTACCTGTGTACCTTCAGCCGATGGACAGACCGCCTCGTGTCTGTGTCCTACAACCTGCTTTGGG GCCCCTGATGGCACAGTGTGTGGCAGTGATGGTGTTGACTACCCTAGTGAGTGCCAGCTGCTCCGTCATG CCTGTGCCAACCAGGAGCACATCTTTAAGAAGTTCGATGGTCCTTGTGACCCCTGCCAGGGCAGCATGTC AGACCTGAATCATATTTGCCGGGTGAACCCACGTACACGGCACCCAGAAATGCTTCTGCGGCCTGAGAAC TGCCCCGCCCAACACACACCTATCTGTGGAGATGATGGGGTCACCTATGAAAACGACTGTGTCATGAGCC GTATAGGTGCAGCCCGTGGCCTGCTTCTCCAGAAAGTGCGCTCTGGTCAATGCCAGACTCGAGACCAGTG CCCGGAGACCTGCCAGTTTAACTCTGTATGCCTGTCCCGCCGCGGCCGTCCCCACTGTTCCTGCGATCGC GTCACCTGTGATGGGGCTTACAGGCCAGTGTGTGCCCAGGATGGGCACACGTATGACAATGACTGTTGGC GCCAACAGGCCGAGTGTCGACAACAGCAGACCATTCCCCCCAAGCACCAGGGCCCGTGTGACCAGACCCC ATCCCCGTGCCGTGGAGCGCAGTGTGCATTTGGGGCAACATGCACAGTGAAGAATGGGAAAGCTGTGTGC GAGTGCCAGCGGGTGTGCTCGGGCGGCTACGATCCTGTGTGCGGCAGTGATGGTGTCACTTACGGCAGTG

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ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: AscI-MluI

ACCN: NM_021604

Insert Size: 6105 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:
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_021604.3, NP_067617.3

RefSeq Size: 7379 bp

RefSeq ORF: 6105 bp

Locus ID: 11603

Cytogenetics: 4 88.55 cM

Gene Summary: Isoform 1: heparan sulfate basal lamina glycoprotein that plays a central role in the formation and the maintenance of the neuromuscular junction (NMJ) and directs key events in postsynaptic differentiation. This neuron-specific (z+) isoform is a component of the AGRN-LRP4 receptor complex that induces the phosphorylation and activation of MUSK. The activation of MUSK in myotubes induces the formation of NMJ by regulating different processes including the transcription of specific genes and the clustering of AChR in the postsynaptic membrane. Calcium ions are required for maximal AChR clustering. AGRN function in neurons is highly regulated by alternative splicing, glycan binding and proteolytic processing. Modulates calcium ion homeostasis in neurons, specifically by inducing an increase in cytoplasmic calcium ions. Functions differentially in the central nervous system (CNS) by inhibiting the alpha(3)-subtype of Na+/K+-ATPase and evoking depolarization at CNS synapses. This transmembrane agrin (TM-agrin) isoform, the predominate form in neurons of the brain, induces dendritic filopodia and synapse formation in mature hippocampal neurons in large part due to the attached glycosaminoglycan chains and the action of Rho-family GTPases.[UniProtKB/Swiss-Prot Function]