

Product datasheet for **MC216203**

Rgma (NM_177740) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Rgma (NM_177740) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Rgma
Synonyms:	BC059072; C230063O06
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >MC216203 representing NM_177740
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGACGCCGCAAGGGAGAGGCTAGTGGTAACAGGCCGAGCTGGATGGATGGGTATGGGGAGAGGGGCAG
 GACGTTACAGCCCTGGGATTGTGGCCGACCTCGCCTTCTCTGCAGCTTCCCCGAGCCATCTCCCC
 CTGCAAAATCCTCAAGTCAACTCTGAGTTCTGGAGCGCCACGTATCAGGCAGCCACGCCCTGCCTCC
 GACGACGTGCCGGAGTTCTGTGCAGCCCTGCGCACCTACGCCCTGTGCACTCGGGGACAGCCCGCACCT
 GCCGGGGCAGCTGGCTTACCACTCGGCTGTCCATGGCATAGAGGACCTTATGAGCCAGCACAAGTCTC
 CAAGGACGGCCCCACCTCACAGCCGCGAGTGGCAGCTCCCGCCAGCTGGGGACAGCCAGGAGCGCTCG
 GATAGCCCCGAGATCTGCCACTATGAGAAGAGTTTCCACAAGCACTCAGCTGCCCACTACACTCACT
 GCGGCCTCTTTGGGGACCCACACCTCAGGACTTTCACAGACCACTCCAGACATGCAAGGTGCAAGGCGC
 CTGGCCTCTCATGACAATAATTACCTGAACGTGCAAGTACCAATACACCTGTGCTGCCGGCTCCGCA
 GCTACCGCCACCAAGCTCACCATCATCTTCAAGAACTTCCAAGAGTGTGTGGACCAGAAAGTCTACC
 AAGCTGAAATGGACGAATTCCTGCTGCCTTTGCGGACGGCTCCAAAAATGGGGGAGATAAACACGGGGC
 CAACAGCTGAAGATCACAGAGAAGGTGTGGGCCAGCACGTGGAGATCCAGGCCAAGTACATCGGCACC
 ACCATCGTGGTGCAGAGTGGGCCGCTACCTGACCTTTGCCGTCCGGATGCCCGAGGAGGTAGTCAACG
 CCGTGGAGGACCGTGACAGCCAAGGCTCTACCTCTGCCTGCGGGGCTGCCCGCTCAACCAGCAGATCGA
 CTTCCAGGCTTTCCGTGCCAACGCTGAAAGCCCTCGCAGGCCAGCAGCCGCCAGTCCCTCTCCGTGGTC
 CCCGAGACATTTCCCTATGAGACAGCCGTGGCCAAGTGCAGGAGAGCTGCCCGTAGAAGACCTGTACT
 ACCAGGCTGTGCTTTCGACCTCTCACGACTGGTGATGTGAAGTTCACGCTGGCTACTATGCTTT
 GGAGGATGGCAAGATGCTCCACTCCAACAAGGACAAGCTGCATCTGTTTGAAGGACTCGGGAGCTGCCA
 GGAGCCGTGGCCCGCCGCCGCTGCCACCACATTCCCTTGCCCGCCAGATTCTCCTTGGCACCA
 TCCCACTTCTGCTCTGCTGTGTTGGTAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM_177740
- Insert Size:** 1365 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_177740.5](#), [NP_808408.2](#)

RefSeq Size: 3586 bp

RefSeq ORF: 1365 bp

Locus ID: 244058

UniProt ID: [Q6PCX7](#)

Cytogenetics: 7 D1

Gene Summary: Member of the repulsive guidance molecule (RGM) family that performs several functions in the developing and adult nervous system. Regulates cephalic neural tube closure, inhibits neurite outgrowth and cortical neuron branching, and the formation of mature synapses. Binding to its receptor NEO1/neogenin induces activation of RHOA-ROCK1/Rho-kinase signaling pathway through UNC5B-ARHGEF12/LARG-PTK2/FAK1 cascade, leading to collapse of the neuronal growth cone and neurite outgrowth inhibition. Furthermore, RGMA binding to NEO1/neogenin leads to HRAS inactivation by influencing HRAS-PTK2/FAK1-AKT1 pathway. It also functions as a bone morphogenetic protein (BMP) coreceptor that may signal through SMAD1, SMAD5, and SMAD8.[UniProtKB/Swiss-Prot Function]