

## Product datasheet for MC223885

### Rasgrf2 (NM\_009027) Mouse Untagged Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Rasgrf2 (NM\_009027) Mouse Untagged Clone  
**Tag:** Tag Free  
**Symbol:** Rasgrf2  
**Synonyms:** 6330417G04Rik; AW048350; Grf2; Ras-GRF2  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**Fully Sequenced ORF:** >MC223885 representing NM\_009027  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCGCGATCGCC

ATGCAGAAGAGCGTGGCTACAACGAGGGGCACGCCCTGTACCTGGCCATGCTGGCGCGCAAGGAGGGCA  
 CCAAACCGGGCTTCTGAGCAAGAAGGCTGCAGAGGCGAGCCGCTGGCACGAGAAGTGGTTCGCTCTCTA  
 CCAGAATGTGCTCTTTACTTCAAGGCGAGCAGAGCGGCCGAGCCGAGCGGCGCCGAGCGGATGTACCTCTAGAGGGC  
 TGCAGCTGTGAGCGGACGCTGCACCACCCAGGACCAACGCAGGACCCGAGCGCGCCGGGACGCTTTGG  
 ACAAGCAGTATTACTTCACTGTCCTTTTGGGCACGATGGTCAAAAACCACTGGAGCTGCCTGTGAGGA  
 GGAGCAGGCCGGAAAGAGTGGATGGAGGCCATTCACCAAGCCAGTTACGCGGACATTTTGATCGAGAGG  
 GAAGTGCTAATGCAGAAGTACATTCATCTAGTTTCAGATTGGAGACCGAGAAGATCGCCACCAACCAAC  
 TCCGACATCAACTCGAAGATCAAGATACCGAAATCGAAAGGCTTAAATCAGAGATTGTTGCTCTTAATAA  
 GACCAAGGAACGGATGCGTCCGTACCACGTCCATCAAGAGGAGGAGGATCCAGACATCAAGAAGATTAAG  
 AAGTTTCAGAGCTTCATGAGAGGGTGGCTGTGTAGGAGGAAGTGAAGACCATCGTCAGGACTACATTT  
 GTTCTCCCATGCAGAGAGCATGAGGAAGAGAAACCAGATTGTGTTCCAGATGGTGGAGCCGAGACGGA  
 GTATGTACACCAGCTTTACATCCTGGTGAACGGTTTCTCAGGCCCTGCGCATGGCAGCCAGCTCCAAG  
 AAGCCCCCATTAAACCACGATGACGTACGACGATTTTTCTCAACAGTGAACAATCATGTTCTTCATG  
 AAATATTCATCAAGGACTAAAGGCAAGGCTGGCAAATGGCCTACTTTGGTTTTAGCGGATCTATTTGA  
 TATTTTGTGCCATGCTGAACATTTATCAAGAATTTGTACGTAATCACCAGTACAGCCTCCAAGTACTT  
 GCCAAGTGAAGCAAAACAGAGATTTTGACAAGCTCTTAAAGCAGTATGAAGCCAACCCTGCCTGTGAGG  
 GGAGGATGCTGGAGACGTTCTTGACCTACCAATGTTTCAGATCCCAGGTATATCATCACGCTGCACGA  
 ACTCCTGGCCACACCCCATGAACATGTGGAGAGGAAAAGTCTGGAGTTCGCTAAGTCCAAGCTGGAG  
 GAACTGTCCAGAGTGATGCATGATGAAGTCAGTGACACCGAGAACATACGAAAAATCTCGCCATTGAGA  
 GGATGATCGTAGAGGGCTGTGACATTTTCTGGACACCAGCCAACTTTTATCCGACAAGGTTCCCTTAT  
 TCAAGTGCTTCTGTGGAGAGGGGAAACTGAGTAAAGTCCGCTGGGCTCGCTGTCCCTGAAAAAGGAA  
 GGCGAGAGACAGTGTTTCTTATTACGAAGCACTTTCTGATTTGTACACGAAGTTCAGGAGGAAAGCTGC



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ATTTGCTCAAGACAGGTGGGGTTCTCTCCCTCATTCAAGTGTACATTGATTGAGGAGCCCGATGGAAGTGA  
 CGATGACCCCAAAGTTCTGGCCACATGTTTGGACATCTGGATTTTAAAAATCGTAGTGGAGCCTCCTGAC  
 GCTGCCTCTTACTGTGGTCTTATTGGCACCTTACGCCAGGAGAAGGCTGCATGGATGAGCGACATCA  
 GTCAGTGTGTGGACAATATACGATGTAACGGATTGATGACTATAGTCTTTGAAGAGAATTCAAAAGTTAC  
 TGTGCCACATATGATTAAGTCTGATGCCGTCTTCACAAAGACGACACTGACATCTGTTTCAGTAAAACA  
 CTCAATTCCTGCAAAGTGCCCCAGATCCGCTACGCCAGCGTGGAGCGCCTTTGGAGCGGTTGACGGACT  
 TGCGGTTTCTGAGCATTGATTTCTCAACACCTTCTGCACACCTACCGCATTTCACCACGGCCACCGT  
 AGTGCTGGCAAAGCTCTCAGACATCTACAAGAGGCCTTTCACCTCATTCTGTGAGTCAATTAGAGTTA  
 TTTTTGGCCACAAGCCAGAACAACAGAGAACATTTGGTAGATGGAAAATCCCCACGTCTCTGTGCGAAGT  
 TCTCTTCCCACCTCCCCTGGCTGTGTCCAGAACATCCTCCCAGTGAGGGCCAGAAAGCTGTCTTTGAC  
 GTCTTCTTGAAGTCAAGGATTGGAGCCTTGGACCTGACTAATTCCTCATCTTCCAGTAGTCCCACCACC  
 ACCACCCACAGCCCTGTGCATCCCACCACCGCACACTGCTGTCTTGGAGTCTGCACCAGCCGACAAAAG  
 CGGGAGATTCTGCAGACATGTCACCATGTAGATCCCCACAACCTCCCGCACCTCCGCTATCGGCAGCC  
 TGGAGGACAGGTAGCCGACAGCGCCACTGTTCTGTGTCACCTGCTTCTGCTTTTGAATCGCCACAGCT  
 GCAGCAGGACATGGGAGTCCACCAGGATTAACAACGAGAGAACATGTGACAAGGAGTTCATCATACGGA  
 GAACAGCCACCAATCGAGTCTGAATGTCTCCGCCACTGGGTCTCAAAGCATGCCCAGGATTTTGAAGT  
 CAATAATGAAGTCAAATGAATGTTCTAAACTTGCTAGAGAAGTTCTACGAGACCCGGACCTTCTTCT  
 CAAGAAAGGAAAGCAACGGCAACATCCTGAGGGCTCTTTCACAAGATGATCAAGATGATATCCACCTAA  
 AATTAGAGGATATAATTCAAATGACAGACTGTCCAAGGCGGAGTGCTTTGAGACGTTGTGAGCCATGGA  
 GCTGGCCGAGCAGATCACTCTCCTGGACCACATTTGTTTTCAGAAGCATCCCCTACGAAGAGTTTCTTGGG  
 CAGGGCTGGATGAAGCTTGACAAGAACGAAAGGACGCCTTACATCATGAAAACCAGCCAGCACTTCAATG  
 AGATGAGTAACCTGGTGGCCTCCAGATAATGAATTATGCCGACATCAGCTCCCGTGCCAACGCCATTGA  
 GAAGTGGGTGGCAGTGGCGGACATTTGCCGATGTCTCCACAACATAATGGTGTCTGGAGATCACCTCA  
 GCCTTAAACAGAAGTGCCATCTACAGGCTGAAGAAAACCTGGGCCAAGGTGTCCAAGCAGACAAAAGCTC  
 TAATGGACAAACTTCAGAAGACTGTTTCTCTGAAGGAAGATTTAAAAACCTCAGAGAGACTCTCAAAAA  
 CTGTAACCCCCAGCTGTCCCTTACCTTGGGATGTAAGTGTGACAGATCTGGCATTGATGAAGAAGGGACA  
 CCGAACTTACCGAAGAGGGCCTTGTCAATTTCTCAAAATGCGAATGATATCACACATTATTCGAGAGA  
 TACGCCAGTTCAGCAGACCGCTTACCGCATAGACCAGCAGCCAAAGGTCATAACAATACCTGCTTGACAA  
 AGCCCTTGTGATAGACGAAGATTACTCTATGAGCTGTCACTCAAATTTGAACCTCGACTCCCTGCTGA

**ACGGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

- Restriction Sites:** SgfI-MluI
- ACCN:** NM\_009027
- Insert Size:** 3570 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\\_009027.3](#), [NP\\_033053.2](#)

**RefSeq Size:** 7595 bp

**RefSeq ORF:** 3570 bp

**Locus ID:** 19418

**UniProt ID:** [P70392](#)

**Cytogenetics:** 13 47.43 cM

**Gene Summary:** Functions as a calcium-regulated nucleotide exchange factor activating both Ras and RAC1 through the exchange of bound GDP for GTP. Preferentially activates HRAS in vivo compared to RRAS based on their different types of prenylation. Functions in synaptic plasticity by contributing to the induction of long term potentiation.[UniProtKB/Swiss-Prot Function]