

## Product datasheet for **MG226568**

### Rasgrf2 (NM\_009027) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Rasgrf2 (NM_009027) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Rasgrf2
Synonyms:	6330417G04Rik; AW048350; Grf2; Ras-GRF2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>MG226568 representing NM_009027 Red=Cloning site Blue=ORF Green=Tags(s)

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GCC**CGATCGCC**

ATGCAGAAGAGCGTGGCTACAACGAGGGGCACGCCCTGTACCTGGCCATGCTGGCGCGCAAGGAGGGCA  
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GCGGAGAGACAGTGTTCCTATTACGAAGCACTTTCTGATTTGTACACGAAGTTCAGGAGGAAAGCTGC  
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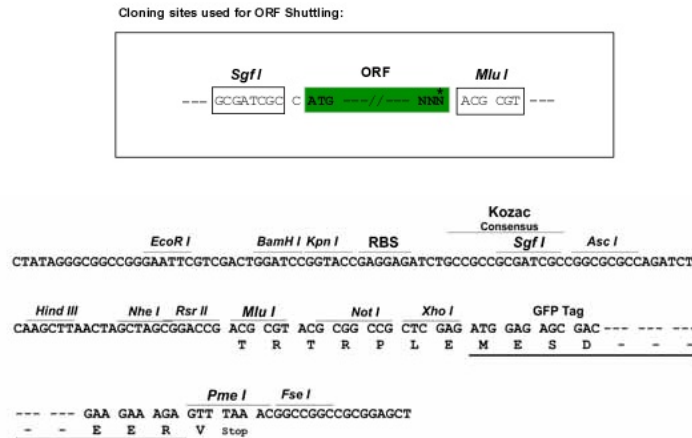
ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >MG226568 representing NM\_009027  
 Red=Cloning site Green=Tags(s)

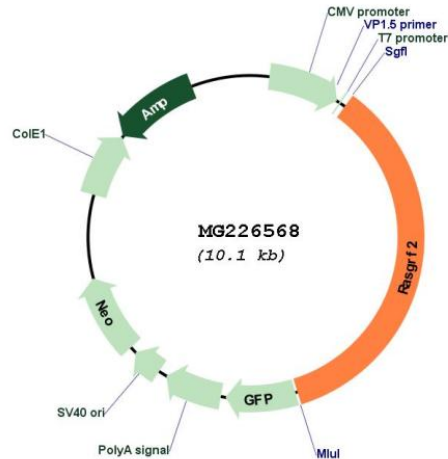
MQKSVRYNEGHALYLAMLARKEGTRKGFSLSKAAEASRWHEKWFALYQNVLFYFEGEQSGRPAGMYLLEG  
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 AAGHGSPGPFNNERTCDKEFIIRRTATNRVLNVLRHVSKHAQDFELNNEKMNVLNLLVEVLRDPDLLP  
 QERKATANILRALSQDDQDDIHLKLEDIIQMTDCPKAECFETLSAMELAEQITLLDHIVFRSIPYEEFLG  
 QGWMKLDKNERTPYIMKTSQHFNEMSNLVAQIMNYADISSRANAIEKWAVADICRCLHNYNGVLEITS  
 ALNRSAYRLKKTWAKVSKQTKALMDKLQKTVSSEGRFKNLRETLKNCNPPAVPYLGYMLTDLAFIEEGT  
 PNFTEEGLVNFSKMRMISHIIREIRQFQQTAYRIDQQPKVIQYLLDKALVIDEDSLYELSLKIEPRLPA

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI  
 Cloning Scheme:



## Plasmid Map:



ACCN: NM\_009027

ORF Size: 3567 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\\_009027.4](#)

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]