

Product datasheet for **MG211040**

Rapgef3 (NM_144850) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Rapgef3 (NM_144850) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Rapgef3
Synonyms:	2310016P22Rik; 9330170P05Rik; Epac; Epac1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG211040 representing NM_144850
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**GCGATCGCC**

ATGGTGTGAAGAGAATGCACCGTCCCCGCTGCTGCTCTTACCAGCTAGTGTTCGAGCACCGGCCGCCCA
 GCTGCATCCAGGGACTCCGCTGGACACCACTTACCAACAGCGAGGACTCCCTGGATTTCAGAGTGAGTCT
 GGAGCAGGCCACCACAGAGCATGTGCACAAGGCAGGGAAGCTCCTGCACCGCCATCTCTTGCCACGTAC
 CCTACCCTCATCCGAGACAGAAAATACCATCTGCGACTATATCGGCATTGCTGCTCTGGCCGGGAGCTAG
 TGGATGGGATCTTGGCTCTGGGCTTGGGGTCCACTCACGGAGCCAAGCCGTGGGCATCTGCCAAGTGT
 GCTGGATGAGGGTGCCCTTTGTCATGTA AACATGACTGGACCTCCAGGACCGAGATGCCAATTCTAC
 AGGTTCCCTGGACCGGAGCCGAGCCTACAGGAACTCAAGATGTGAAGAGGAGCTTGTGAGGCTATGG
 CCCTCCTGTCCCAGCGAGGGCCTGATGCCCTACTCACCGTGGCGCTCCGGAAGCCCCAGGTGAGCGTAC
 GGATGAAGAACTGGACCTGATCTTTGAAGAGCTGCTGCATATCAAGGCGGTGGCACACCTTTCTAACTCG
 GTGAAGCGGGAAGTAGCTGCTGTTCTGCTCTTTGAACCACACAGCAAGGCAGGAAGTGTGTTGTTACGCC
 AGGGGGACAAGGGTACCTCGTGGTACATTATCTGGAAGGGATCTGTCAATGTGGTGACCCATGGCAAGGG
 GCTGGTGACCACGTTGCACGAGGGAGATGACTTTGGACAGCTGGCTCTGGTGAACGACGCACCTCGGGCA
 GCCACCATCATCCTTCGAGAAAAAAGTGTCACTTTCTGCGTGTGGACAAGCAGGACTTCAACCGCATCA
 TCAAGGATGTGGAAGCAAAAACCATGAGACTGGAAGAACACGGCAAGTGGTCTTAGTTCTGGAGAGAAC
 CTCTCAGGGTGTGGCCCTTCCCGTCCCCGACCCAGGCAGGAACCGGTATACGGTATGTCTGGCACC
 CCAGAGAAAACTCTAGAAGTGTGTTGGAGGCTATGAGACCGGATTCCAGTGCTCATGACCAACAGAGA
 CGTTCCTCAGTGACTTCTGCTGACCCACAGTCTTTCATGCCACAGCCAGCTTCTACTGCCCTCCT
 GCACCATTCCAGTGGAGCCAGCAGACCTGCTGGAGGCAGCAGCAGGAGCAGACACACCTACATCTGTC
 AACAAAGAGGCAGCAGATCCTGCGCTAGTTGGCCGATGGGTGGCCCTGTATAGCCCGATGCTCCACTCGG
 ATCCCGTGGCCACCAGCTTCTCCAGAACTCTCAGACCTGGTGAGCAGAGATGCCCGACTTAGCAACTT
 GCTGAGGGAACAGTATCCAGAGAGACGGCGACACCACAGGTTGGAATAAGGCTGTGGAAACGTATCTCT
 CAGACCAAGGCCCGAATGCACCTGTTTGGCTCCCTAACAGGAGGAACCCCTCCAAGCAGCGCGGGT
 CCATCCGAGTTGGGGACAAAGTCCCTACGACATCTGCAGACCTGACCACTCAGTGTGACCTGCACCT
 GCCGGTGACGGCCTCGGTGAGAGAAGTGTGCGAGCTTTGGCCATGAGGACCACTGGACCAAGGGACAG
 GTGTTGGTGAAGTCAATTCTGCCGGTGTGCTGTTGGCTTGACCCAGATGCCCGTGGTGTGGCCACAT
 CCCTGGGGCTCAACGAGCGGCTCTTGTGTCGACCCACAGGAAGTGCATGAGCTGACCCACACCTGA
 GCAGCTGGGCCCACTCTGGGTTCTTCTGAGATGCTGGACCTAGTGAGCGCAAGGACCTGGCAGGCCAG
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 CTGCCCTGTTCTGGCTCCCGGGCTCAGTACTCAGGAAGTTCATCAAGCTGGCAGCCACCTCAAGGAG
 CAGAAGAACCTCAACTCTTCTTGGCGTGTGTTGGCTCAGCAACTCGGCCATCAGCCGGCTGGCCC
 ACACCTGGGAGCGCTGCCCATAAAGTACGGAAGCTGTACTCAGCCCTGGAAAGGTTGCTGGACCTTC
 CTGGAACCACCGAGTGTACCGATTGGCTCTCACCAAGCTCTCCCTCCTGTCATCCCCTCATGCCCTC
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 AGATGCGGATGATGGCCAGAGCGGTGCGGATGCTTACCACCTGCCGAAGTACAGTACCGCGCTCTATC
 ACCACTCAGAAGCCGAGTGTCCACATCCACGAGGACAGCCAGGGATCAAGGATCTCCACGTGTTCTGAG
 CAGTCCCTGAGCACCCGGAGTCCAGCCAGCACCTGGGCTTATGTCCAGCAGCTGAAGGTCATTGACAACC
 AGCGGGAAGTGTCCCGCTCTCCCGGGAGCTGGAACCA

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >MG211040 representing NM_144850
 Red=Cloning site Green=Tags(s)

MVLKRMHRPRCCSYQLVFEHRRPSCIQGLRWTPLTNSEDLSDFRVSLEQATTEHVHKAGKLLHRHLLATY
 PTLIRDRKYHLRLYRHCCSGRELVDGILALGLGVHSRSQAVGICQVLLDEGALCHVKHDWTFQDRDAQFY
 RFPGPEPEPTGTQDVEEELVEAMALLSQRGPDALLTVALRKPPGQRTDEELDLI FEELLHIKAVAHLSNS
 VKRELA AVL L FEPH SKAGTVL F SQDGKTSWYI IWKGSVNVVTHGKGLVTTLHEGDDFGQLALVNDAPRA
 ATIILRENNCHFLRVDKQDFNRI IKDVEAKTMRLEE HGVV LVLERTSQGAGPSRPPTPGRNRYTVMSGT
 PEKILELLEAMRPDSSAHDP TETFLSDFLLTHSVFMPSTQLFTALLHHFHVEPADPAGGSEQEHSTYIC
 NKRQQILRLVGRWVALYSPMLHSDPVATSFLQKLSDLVSRDARLSNLLREQYPERRRHHRENGCGNVSP
 QTKARNAPVWLPNQEEPLSSAGAIRVGDKVPYD ICRPDH SVL TLHL PVTASVREVMAALAHEDHWTKGQ
 VLVK VNSAGDVVGLQPDARGVATSLGLNERL FVVD P QEVHELTPHPEQLGPTLGSSEMLDLVSAKDLAQ
 L TDHDWNL FNRIHQVQEHLRDVTTANLERFMRRFNELQYVWATELCLCPVPGSRAQLLRKFIKLAHLKE
 QKNLNSFFAVMFGLSNSAISRLAHTWERLPHKVRKLYSALERLLDPSWNHRVYRLALTKLSPPVIFMPL
 LLKDVTFIHEGNHTLVENLINF EKMRMMARAVRMLHHC RSHSTAPLSPLRSRVSHIHEDSQGSRI STCSE
 QSLSTRSPASTWAYVQQLKVIDNQRELSRLSRELEP

TRTRPLE - GFP Tag - V

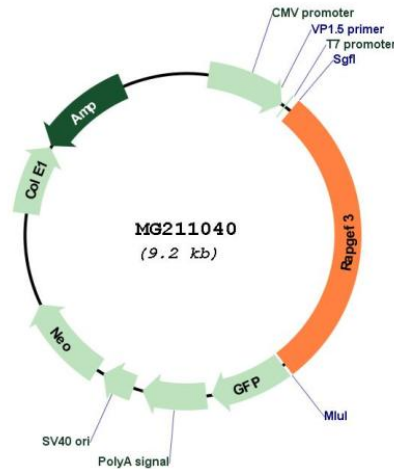
Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:


ACCN: NM_144850

ORF Size: 2628 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_144850.1](#), [NP_659099.1](#)

RefSeq Size: 3644 bp

RefSeq ORF: 2757 bp

Locus ID: 223864

UniProt ID: [Q8VCC8](#)

Cytogenetics: 15 F1

Gene Summary: Guanine nucleotide exchange factor (GEF) for RAP1A and RAP2A small GTPases that is activated by binding cAMP. Through simultaneous binding of PDE3B to RAPGEF3 and PIK3R6 is assembled in a signaling complex in which it activates the PI3K gamma complex and which is involved in angiogenesis. Plays a role in the modulation of the cAMP-induced dynamic control of endothelial barrier function through a pathway that is independent on Rho-mediated signaling. Required for the actin rearrangement at cell-cell junctions, such as stress fibers and junctional actin (By similarity).[UniProtKB/Swiss-Prot Function]