

Product datasheet for **RG204022**

ARHGEF1 (NM_198977) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ARHGEF1 (NM_198977) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ARHGEF1
Synonyms:	GEF1; IMD62; LBCL2; LSC; P115-RHOGEF; SUB1.5
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>RG204022 representing NM_198977
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGGAAGACTTCGCCGAGGGCGGCCCTCCCAGGCCCTCCCGCCTGGCTGTTCCCGTCAGCATCA
 TCGGGGCTGAGGATGAGGATTTTGAGAACGAGCTGGAGACAAACTCAGAAGAGCAAAACAGCCAGTTCCA
 GAGCCTGGAGCAGGTGAAGCGGCCCCAGCCACCTCATGGCCCTCCTGCAGCAGTGGCCCTGCAGTTT
 GAGCCAGGACCCCTGTTTCTCCGGGTGCCGGTCCCTCCCAACGTCGCTTTGAACTTGACCGCACTAGGG
 CTGACCTCATCTCCGAGGATGTCCAGCGCGGTTCTGTCAGGAGGTGGTCAAAGCCAGCAGGTAGCCGT
 GGGCCGGCAGCTGGAGGACTTCCGTTCCAAGCGGCTCATGGGCATGACGCCCTGGGAGCAGGAGCTGGCC
 CAGCTGGAGGCTTGGGTTGGGCGGACCGAGCCAGCTACGAGGCCGGGAGCGGCACGTGGCGGAGCGGC
 TGCTCATGCACCTGGAGGAGATGCAACATAACCATCTTACCGACGAAGAAAAGAGTGTGCCGTGGTCAA
 CGCCATTGGCCTGTACATGCGCCACCTTGGGGTGGGACCAAGAGTGGAGACAAGAAGTCGGGGAGGAAC
 TTCTTCCGAAAAAGGTGATGGGGAACCGCGGTGGGACGAGCCTGCCAAGACCAAGAAGGGGCTGAGCA
 GCATCCTGGATGCCGCCCTGGAAACCGGGGAGAGCCCCAGGTTCCAGATTTTCGACACCTCAAAGCAGA
 GGTGATGCCGAGAAGCCAGGTGCTACAGACCGGAAGGGAGGCGTGGGATGCCCTCTCGGGACCGGAAT
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 AACCGGTGCTGACGCCCCCTGGAGCTGGGGACTCATCCCCGAGGGCCCAATGAGCCTGGAGTCTT
 GGGCCCCCAGAGGTACCGACGAGGGGGCCGAAACCGAGAGCCCGAGCCTGGAGATGAGGGGGAGCCG
 GGGCGTGGGACTGGAGCTTGAACAGAAGAGCCTCCCGCTGGCGGAACTCGTCCCCCAGACACCC
 TGCAGAGCTGCCAAGAGCCAGGTGAAGCGGCAGGAGTTCATCAGCGAGCTGCTGGTGAACAGAGCGGC
 CCACGTGCGCATGCTGCGGGTCTGCACGACCTTCTTCCAGCCCATGGCAGAATGCCTGTTCTTCCCC
 TTGGAGGAGCTGCAGAACATCTTCCCCAGCCTGGACGAGCTCATCGAGGTGCATTCCCTGTTCTCGATC
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 CGGGTGGCCCGCTGCAGCTGAAGGACATGATCCCCACGGAGATGCAGCGGTGACCAAGTACCCCT
 GCTCTGCAGAGCATCGGCAGAACACAGAAGAGCCACAGAACGGGAGAAAAGTGGAGCTGGCAGCCGAG
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 CCGAGAACCCTCCTCAGCAGCTCTGAGAACGGCAATGGTGGCCGAGAGACGTCTCCAGCTGATGCCCGG
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 CCCTTCGAAAAGTGTGTCCCTGAAGCAGTCTGTTTCCGGCGGAGGAAGACAATGGGGCGGGGCTCC
 TCGAGATGGGATGGGTTCCAGGGGGCGGCCCTGAGCCAGCACGGACCCAGGAAATCCAGGAGAAC
 CTGCTCAGCTTGGAGGAGACATGAAGCAGCTGGAGGAGTTGGAGGAGGAATTTTCCCGCTGAGACCC
 TCCTGTCTCAGCTTGGGGGAACTCTGTCCCCAGCCTGGCTGCAT

ACGGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG204022 representing NM_198977
 Red=Cloning site Green=Tags(s)

MEDFARGAASPGPSRPLVPSIIGAEDDFENELETNSEEQNSQFQSLEQVKRRPAHLMALLQHVALQF
 EPGPLVLRVPPVNVAFELDRTRADLISEDVQRRFVQEVVQSQQVAVGRQLEDFRSKRLMGMPWEQELA
 QLEAWVGRDRASYEARERHVAERLLMHLEEMQHTISTDEEKSAAVVNAIGLYMRHLGVRTKSGDKKSGRN
 FFRKKVMGNRRSDEPAKTKKGLSSILDAARWNRGEPQVPDFRHLKAEVDAEKPGATDRKGGVGMPSRDRN
 IGAPGQDTPGVSLHPLSLDSDREPGADAPLELGDSSPQGPMSLESLAPPESTDEGAETESPEPGDEGEP
 GRSGLELEPEEPPGWRELVPDTHLSLPKSQVKRQEVISELLVTEAAHVRLRVLHDLFFQPMAECLFFP
 LEELQNIIFPSLDELIEVHSLFLDRLMKRRQESGYLIEEIGDVLLARFDGAEGSWFQKISSRFCSRQSFAL
 EQLKAKQRKDPRFCAFVQEAESRPRCRLQLKDMIPTMQRLTKYPLLLQSIGQNTTEETEREKVELAAE
 CCREILHHVNQAVRDMEDLLRLKDYQRRDL SHLRQSSDPMLSEFKNLDTKTKLVHEGPLTWRVTKDKA
 VEVHVLDDLLLLQRQDERLLKSHSRTL TPTPDGKTMRLRPVLR L TSAMTREVATDHKAFYVLF TWDQ
 EAQIYELVAQTVSERKNWCALITETAGSLKVPAPASRPKPRPSPSSTREPLLSSSENGNGGRETSPADAR
 TERILSDLLPFCRPGPEGQLAATALRKVLSLKQLLFPAAEDNGAGPPRDGDGVPGGGPLSPARTQEIQEN
 LLSLEETMKQLEEEEFCLRLRLLSQLGGNSVPPQGCT

TRTRPLE - GFP Tag - V

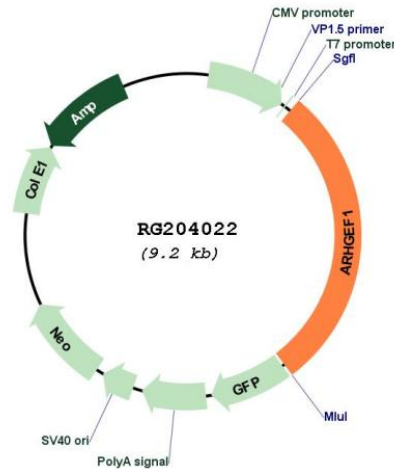
Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:


ACCN: NM_198977

ORF Size: 2637 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_198977.2](#)

RefSeq Size: 3137 bp

RefSeq ORF: 2640 bp

Locus ID: 9138

UniProt ID: [Q92888](#)

Cytogenetics: 19q13.2

Protein Pathways: Regulation of actin cytoskeleton, Vascular smooth muscle contraction

Gene Summary: Rho GTPases play a fundamental role in numerous cellular processes that are initiated by extracellular stimuli that work through G protein coupled receptors. The encoded protein may form complex with G proteins and stimulate Rho-dependent signals. Multiple alternatively spliced transcript variants have been found for this gene, but the full-length nature of some variants has not been defined. [provided by RefSeq, Jul 2008]