

## Product datasheet for MR215297

### Arhgef5 (NM\_133674) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Arhgef5 (NM\_133674) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Arhgef5  
**Synonyms:** 2210412D05Rik; AA717842; AW495314; Tim1  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**Cell Selection:** Neomycin  
**ORF Nucleotide Sequence:** >MR215297 representing NM\_133674  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

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 CTGAAGGTATCATGAGGAGCAGTCAGATCCCTGCCTTGGATCCTGAAGCTCAAGAAGACCGAGACCCATC  
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**Protein Sequence:** >MR215297 representing NM\_133674  
 Red=Cloning site Green=Tags(s)

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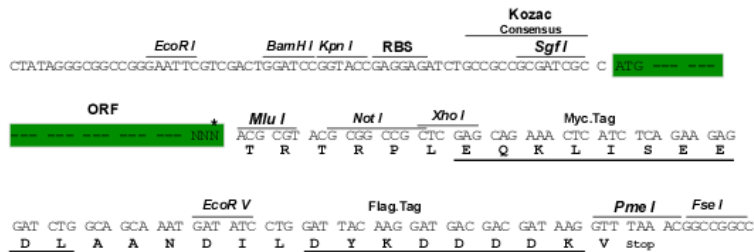
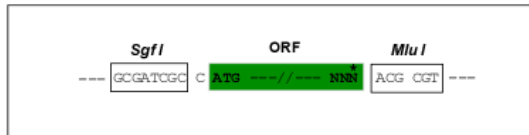
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**Restriction Sites:**

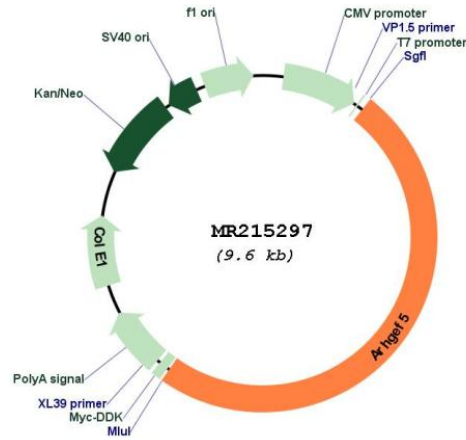
SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**Plasmid Map:**


**ACCN:** NM\_133674

**ORF Size:** 4743 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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\\_133674.1](#), [NP\\_598435.1](#)

**RefSeq Size:** 5420 bp

**RefSeq ORF:** 4746 bp

**Locus ID:** 54324

**UniProt ID:** [E9Q7D5](#)

**Cytogenetics:** 6 B2.1

**MW:** 176.7 kDa

**Gene Summary:** Guanine nucleotide exchange factor which activates Rho GTPases (PubMed:19713215, PubMed:21525037). Strongly activates RHOA (PubMed:19713215, PubMed:21525037). Also strongly activates RHOB, weakly activates RHOC and RHOG and shows no effect on RHOD, RHOV, RHOQ or RAC1 (PubMed:19713215). Involved in regulation of cell shape and actin cytoskeletal organization (PubMed:21525037). Plays a role in actin organization by generating a loss of actin stress fibers and the formation of membrane ruffles and filopodia (By similarity). Required for SRC-induced podosome formation (PubMed:21525037). Involved in positive regulation of immature dendritic cell migration (PubMed:19713215). [UniProtKB/Swiss-Prot Function]