

## Product datasheet for **RC208757**

### **ARHGEF3 (NM\_019555) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	ARHGEF3 (NM_019555) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ARHGEF3
Synonyms:	GEF3; STA3; XPLN
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC208757 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGTGGCCAAGGATTACCCCTTCTACCTCACGGTCAAGAGAGCGAACTGCAGCCTGGAGCTACCCCGG  
 CCAGCGTCCGGCCAAGGACGCTGAGGAGCCTAGTAATAAACGGGTCAAACCCCTTCCCGAGTCACGTC  
 GCTAGCAAACCTCATCCCGCCCGTGAAGGCCACGCCATTAAGCGCTTCAGTCAAACCTGCAGCGCTCC  
 ATTAGCTCCGCAGTGAGAGCCGCCCTGACATCCTCGCCCCGACCCTGGTCCAGAAATGCCGCCCTC  
 CGAGCACGAAACGGAGAGATAGCAAGCTGTGGAGTGAGACCTTCGATGTGTGCGTCAATCAGATGTTAC  
 ATCCAAGGAAATCAAACGTCAGGAGGCGATCTTTGAGCTTTCCAAGGAGAAGAAGACTTGATAGAAGAC  
 TTGAAATTAGCAAAAAGGCCTATCATGACCCCATGCTGAACTCTCCATAATGACAGAACAAGAGTTGA  
 ATCAAATTTTGGAACTGGACTCTAATTCTCTACATGAAGAGCTCCTTAGTCAGCTTCGAGATGT  
 TAGGAAGCCTGATGGCTCGACTGAACATGTTGGTCCCATCCTCGTGGGCTGGCTCCCTTGCTCAGCTCC  
 TATGATAGCTACTGCAGCAATCAAGTAGCCGCAAAGCTCTGCTGGACCACAAAAGCAAGATCACCGAG  
 TCCAGGATTTCTACAGCGATGTTTAGAATCCCCCTTAGCCGCAAACACTAGATCTCTGGAATTTCTCGA  
 TATTCCAAGAAGCCGCTGGTAAAATACCTCTGCTTCTCCGAGAAATCTTGAGGCACACACCAAATGAT  
 AATCCAGATCAGCAGCACTTGGAAGAAGCTATAAATATCATTACGGGAATTGTGGCAGAAATCAACACCA  
 AGACTGGTGAATCTGAATGCCGCTATTATAAAGAGCGGCTTTTACTTGGAGAAGGCCAGAAAGACTC  
 CCTGATCGACAGCTCTCGAGTCTTGTGTGTGATGGTGAAGTGAAGAACAATCGGGCGTGAACTGCAT  
 GTTTTCTGTTCGAAGAAGTGCTTGTGATCACTCGAGCCGTCACCACAATGAGCAGCTTTGCTACCAGC  
 TGTACCGTCAGCCAATCCCGTGAAGACCTCTGCTGGAAGACCTCCAGGATGGAGAAGTGAGGCTGGG  
 TGGCTCCCTGCGAGGGGCATTCAGCAACAATGAGAGAATTA AAAACTTCTTCAGAGTCAGTTTCAAAAAT  
 GGATCCCAAAGTCAGACCACTCGCTACAAGCCAATGACACTTTCAACAACAGCAGTGGCTTAACTGTA  
 TTCGTCAGCCAAAGAAACAGTTTTGTGTGCTGCCGGCAAGCTGGGTGCTTACTCCGAGGGATCGTT  
 CCTAAATCCCACCACGGGAGCAGAGAGCTACAGGGAGAAAACAAAACCTTGGAGCAGATGGACCAATCGGAC  
 AGTGAGTCAGACTGTAGTATGGACACGAGTGAGGTGAGCTCGACTGTGAGCGCATGGAACAGACAGACT  
 CTTCTGTGGAACAGCAGGCACGGTGAAGTAACGTC

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC208757 protein sequence  
 Red=Cloning site Green=Tags(s)

MVAKDYPFYLVKVRANCSLELPPASGPAKDAEEPSNKRKVKPLSRVTSANLIPPVKATPLKRFSQLQRS  
 ISFRSESRPDIAPRPWSRNAAPSSTKRRDLSLWSETFDVCVNQMLTSKEIKRQEAFELSQGEEDLIED  
 LKLAKKAYHDPMLKLSIMTEQELNQIFGTLDSLIPLHEELLSQLRDVRKPDGSTEHVGPILVWLPCLSS  
 YDSYCSNQVAAKALLDHKKQDHRVQDFLQRCLESPFSRKLDLWNFLDIPRSRLVKYPLLLREILRHPND  
 NPDQQHLEEAINI IQGIVAEINTKTGESECRYKERLLYLEEGQKDSLIDSSRVL CCHGELKNNRGVKLH  
 VFLFQEVLVITRAVTHNEQLCYLYRQPIPVKDLLLEDLQDGEVRLGSLRGAFSNNERIKNFRVSKN  
 GSQSQTHSLQANDTFNKQWLNCIRQAKETVLC AAGQAGVLDSEGSFLNPTTGSRELQGETKLEQMDQSD  
 SESDCSMDTSEVSLDCERMEQTDSSCGNSRHGESNV

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6546\\_b06.zip](https://cdn.origene.com/chromatograms/mk6546_b06.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_019555

**ORF Size:** 1578 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_019555.3](#)

**RefSeq Size:** 3612 bp

**RefSeq ORF:** 1581 bp

**Locus ID:** 50650

UniProt ID: [Q9NR81](#)

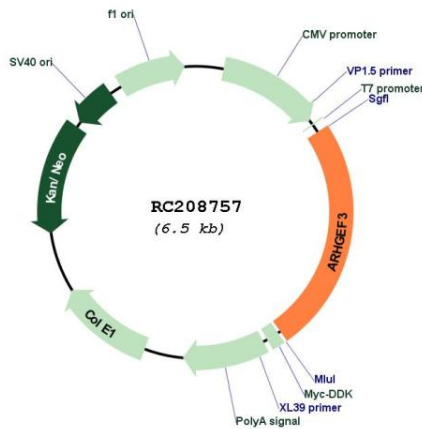
Cytogenetics: 3p14.3

Domains: RhoGEF, PH

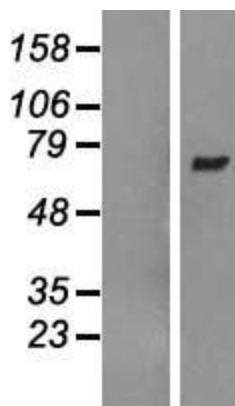
MW: 59.8 kDa

**Gene Summary:** Rho-like GTPases are involved in a variety of cellular processes, and they are activated by binding GTP and inactivated by conversion of GTP to GDP by their intrinsic GTPase activity. Guanine nucleotide exchange factors (GEFs) accelerate the GTPase activity of Rho GTPases by catalyzing their release of bound GDP. This gene encodes a guanine nucleotide exchange factor, which specifically activates two members of the Rho GTPase family: RHOA and RHOB, both of which have a role in bone cell biology. It has been identified that genetic variation in this gene plays a role in the determination of bone mineral density (BMD), indicating the implication of this gene in postmenopausal osteoporosis. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RC208757



Western blot validation of overexpression lysate (Cat# [LY412696]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC208757 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).