

## Product datasheet for **RG213956**

### p114RhoGEF (ARHGEF18) (NM\_015318) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	p114RhoGEF (ARHGEF18) (NM_015318) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ARHGEF18
Synonyms:	P114-RhoGEF; p114RhoGEF; RP78; SA-RhoGEF
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG213956 representing NM_015318 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGACGGTCTCTCAGAAAGGGGGTCCCCAGCCAACACCGAGCCCGGCTGGCCCTGGGACGCAACTCGGAC  
CAATCACAGGAGAGATGGATGAAGCCGATTCTGCGTTTTTAAAATTAAGCAGACAGCTGATGACTCTCT  
GTCCTTACATCTCCAAACACCGAGTCCATTTTTGTAGAAGATCCCTACACCGCCTCGTGAGGAGTGAG  
ATTGAGTCAGACGCCACGAGTTTGAAGCTGAGTCTGGAGCCTCGCCGTGGATGCAGCCTACGCCAAGA  
AGCAAAAGAGGGAGGTGGTGAAGACAAGATGTCCTTTATGAGCTGATGCAGACAGAGGTGCACCAGT  
GCGGACGCTCAAGATCATGCTGAAGGTGTACTCCAGGGCCCTGCAGGAGGAGCTGCAGTTACAGCAGCAAG  
GCCATTGGCCGCTCTTCCCATGCGCTGACGACCTGCTGGAGACGCACAGCCACTTCTCGCTCGGCTCA  
AGGAGCGCCGCCAGGAGTCCCTGGAGGAGGGCAGTGACCGGAATTATGTCATCCAGAAAAATCGGCGACCT  
CCTGGTTACAGCAGTTTTTCAAGTGAAGATGGGGAGAGAAATGAAAGAAAAGTACGGTGTGTTTTGTAGTGGC  
CACAATGAAGCTGTTAGTCATTACAAGTTGCTGCTTCAGCAAAACAAGAAATTTCAAACCTTGATCAAGA  
AAATTGGCAACTTCTCCATCGTGCAGCGGCTTGGCGTGCAGGAGTGCATTCTCTGGTTACACAACGCAT  
AACCAAAATACCCAGTGTGGTGGAGCGCATCATCCAGAACACGGAAGCTGGCACTGAGGACTATGAAGAC  
CTGACCCAGGCCCTTGAACCTCATCAAAGATATCATCTCACAAGTGGAGCCCAAGTCAGTGTGAGTGTGAGA  
AGGGCCAGCGCCTCAGGAGATCGCAGGGAAGATGGACCTGAAGTCTTCCAGCAAACTCAAGAACGGCT  
CACCTTCCGCAAGGAAGACATGCTTCAGCGGCAGCTCCACCTGGAGGGCATGCTATGCTGGAAGACCACA  
TCAGGGCGCTTGAAGATATCCTGGCTATCCTGCTGACCGACGTAATTTTGTGCTACAAGAAAAAGATC  
AGAAATACGTCTTTGCTTCTGTGGACTCAAAGCCACCCGTCATCTCGTTACAAAAGCTCATCGTGAGGGA  
AGTGGCCAACGAGGAGAAAGCGATGTTTCTGATCAGCGCCTCCTTGAAGGGCCGGAGATGTATGAAATC  
TACACGAGCTCCAAGAGGACAGGAACCCCTGGATGGCCACATCCAAGGGCTGTGGAGAGCTGCCCTG  
ACGAGGAGGAGGGGCCCTTCAAGCTGCCGAAGAGGAAAGGAAGTGGTTCGAGGCCCGGCCACGAGACT  
CCGGGACTTTCAAGAGCGTTGAGCATGAAAGACCAGCTGATCGCACAGACCTCTAGAGAAACAGCAG



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ATCTACCTGGAGATGGCCGAGATGGGCGCCTCGAAGACCTGCCCCAGCCCCGAGGCCTATTCGGTGGAG  
 GGGACCCATCCGAGACCCTGCAGGGGAGCTAATTCTCAAGTCGGCCATGAGCGAGATCGAGGGCATCCA  
 GAGCCTGATCTGCAGGCAGCTGGGCAGCGCCAACGGCCAGGCGGAAGACGGAGGCAGCTCCACAGGCCCG  
 CCCAGGAGGGCTGAGACCTTCGCGGGCTACGACTGCACAAACAGCCCCACCAAGAATGGCAGTTTCAAGA  
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 CAGTGACAGTGACATTCTGGGAGCTCTGAGGAATCGCCGAGGTGGTGGAGGCGCCAGGACCGGAATCC  
 GATCCCCGTCTGCCACCCTCTGGAGTCGGAGCTTGTCCAGCGGATCCAGACACTGTCCAGCTGCTCC  
 TGAACCTTCAGGCGGTAATCGCCACCAGGACAGCTATGTGGAGACGACGCGGGCTGCCATCCAGGAGCG  
 GGAGAAGCAGTTCGGCTGCAGTCGACGCGTGGGAACCTGCTGCTGGAGCAGGAGCGCAACGCAACTTC  
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 GGGAGCGCGAGCGCCAGTGGCAGCACCAGGAGCTGGAGCGTGGGGCGCGCGGCTGCAGGAGCGGAGGG  
 CGAGGCGCGCAGCTACGCGAGCGGCTGGAGCAGGAGCGGGCCGAGCTGGAGCGCCAGCGCCAGGCTAC  
 CAGCAGCACTGGAGCGGCTGCGCGAGGCCAGCGTCCCGTGGAGCGGAGCGGGAGCGCTGGAGCTGC  
 TGCGCCGCTCAAGAAGCAGAACACCGCGCCAGGCGCGTCCCGCCGACACACTGGCCGAGGCCAGCC  
 CCCAAGCCACCCTCCAGCTTCAACGGGAAGGGCTGGAGGGCCCTCGTGTGAGCATGCTGCCATCCGGC  
 GTGGGGCCAGGTACGCAGAGCGCCCCAGGTGGCTCGCCGGGACAGCGCCCCACCGAGAACCGGCTGG  
 CCAAGAGCGATGTGCCATCCAGCTGCTCAGCGCCACCAACCAGTTCCAGAGGCAGGCGGCCGTCAGCA  
 GCAGATCCCCACCAAGCTGGCGGCTCCACCAAGGGTGGCAAGGACAAGGGCGGCAAGAGCAGGGGCTCT  
 CAGCGCTGGGAGAGCTCAGCGTCTTCGACCTGAAGCAGCAGCTGCTGCTCAACAAGCTCATGGGAAAG  
 ATGAGAGCACCTCACGGAACCGCGCTCGCTGAGCCCTATCTGCCCGGACAGACAGTCTCGCCCCC  
 ACCAGACCCTGGCTTCCCGCCCCGAGCCACCGCCAGCTGACAGCCCTCCGAGGGTCTCTCTCAAG  
 GCCGGGGCACAGCCCTCTGCCGGGCCCCAGCTCCCTCGCCACTGCCGGCCACACCACTCAGCGCCA  
 AGGAGGACGCCAGCAAAGAAGACGTCATCTTCTC

AGCGGACCGACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG213956 representing NM\_015318  
 Red=Cloning site Green=Tags(s)

MTVSQKGGPQPTSPAGPGTQLGPITGEMDEADSAFLKFKQTADDSLSLTSNPNTESIFVEDPYTASLRSE  
 IESDGHEFEAESWSLAVDAAYAKKQKREVVKRQDVLVELMQTEVHHVRTLKIMLKVYSRALQEELQFSSK  
 ATGRLFP CADDLLETHSHFLARLKERRQESLEEGSDRNYVIQKIGDLLVQQFSGENGERMKEYGVFCSG  
 HNEAVSHYKLLLQNKKFQNLIKKIGNFSIVRRLGVQECILLVTQRITKYVPLVERIIQNTTEAGTEDYED  
 LTQALNL IKDIISQVDAKVSECEKGQRLREIAGKMDLKSSSKLNGLTFRKEDMLQRQLHLEGMLCWKTT  
 SGRLKDILAILLTDVLLLLQEKDQKYVFAVSDSKPPVISLQKLI VREVANEEKAMFLISASLQGPMEYEI  
 YTSSKEDRNAWMAHIQRAVESCPEDEEGPFLPEEERKVVEARATRLRDFQERLSMKDQLIAQSLLEKQQ  
 IYLEMAEMGGLEDLPQPRGLFRGGDPSETLQELILKSAMSEIEGIQSLICRQLGSANGQAEDGGSSTGP  
 PRRAETFAGYDCNTSPTKNGSFKKKVSSTDP RPRDWRGPPNSPDLKLSDSIPGSSEESPQVVEAPGTES  
 DPRLPTVLESELVQRIQTLSQLLLNLQAVIAHQDSYVETQRAAIQEREKQFRLQSTRGNLLEQERQRF  
 EKQREERAALQSQLRHEQQRWERERQWQHLEERAGARLQEREGEARQLRERLEQERAELEQRQAY  
 QHDLERLREAQRAVERERERLELLRRLKQNTAPGALPPDTLAEAQPPSHPPSFNGEGLEGRVSMPLPSG  
 VGPEYAEERPEVARSDAPTENRLAKSDVPIQLLSATNQFQRQAAVQQIPTKLAASTKGGKDKGGKSRGS  
 QRWESSASFDLKQQLLNKLMGKDESTSRNRRSLSPILPGRHSPAPPDPGFPAPSPPPADSPSEGFSLK  
 AGGTALLPGPPAPSPLPATPLSAKEDASKEDVIF

SGPTRRRLE - GFP Tag - V

**Restriction Sites:**

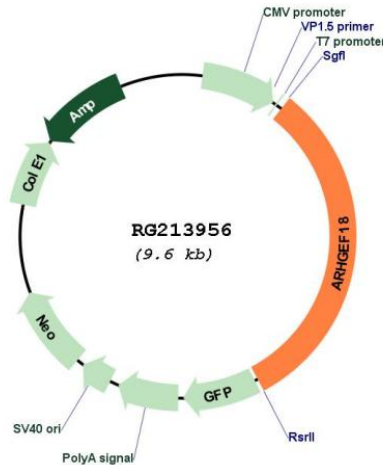
SgfI-RsrII

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:



ACCN: NM\_015318

ORF Size: 3045 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](#)

<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<u><a href="#">NM_015318.4</a></u>
<b>RefSeq Size:</b>	5252 bp
<b>RefSeq ORF:</b>	3048 bp
<b>Locus ID:</b>	23370
<b>UniProt ID:</b>	<u><a href="#">Q6ZSZ5</a></u>
<b>Cytogenetics:</b>	19p13.2
<b>Domains:</b>	RhoGEF, PH
<b>Gene Summary:</b>	Rho GTPases are GTP binding proteins that regulate a wide spectrum of cellular functions. These cellular processes include cytoskeletal rearrangements, gene transcription, cell growth and motility. Activation of Rho GTPases is under the direct control of guanine nucleotide exchange factors (GEFs). The protein encoded by this gene is a guanine nucleotide exchange factor and belongs to the Rho GTPase GEF family. Family members share a common feature, a Dbl (DH) homology domain followed by a pleckstrin (PH) homology domain. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Nov 2018]