

## Product datasheet for **MC221572**

### Arhgef7 (NM\_001113517) Mouse Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Arhgef7 (NM_001113517) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Arhgef7
Synonyms:	betaPix; betaPix-b; betaPix-c; Cool; cool-1; mKIAA0142; p85Cool1; p85SPR; Pak3bp; PIX
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**Fully Sequenced ORF:** >MC221572 representing NM\_001113517  
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGAATTCGCCGAGCAGACCGTTACGTGGCTCATCACCTGGGCGTGCTGGAGTCGCCAAGAAAACCA  
 TCTCGGACCCTGAGGTCTTCTTGCAGGCGTCGCTCAAGGACGGGGTGGTCTATGCCGGCTGCTGGAGCG  
 CCTGCTGCCCGGACCATCGAGAAAGTCTACCCGAGCCGCGGAACGAGAGCGAGTGCCTGAGCAACATC  
 CGCGAGTTCCTGCGCGCCTGCGGGCGTCCCTGCGCCTAGAGACTTTTGATGCAAATGATTTGTATCAGG  
 GGCAGAACTTTAACAAGGTCTCAGCTCCTTGGTGACACTAAATAAAGTGACAGCAGACATTGGACTAGG  
 AAGTGATTCTGTGTGTGCTCGGCCTTCGTCCCATCGGATAAAGTCTTTTGATTCCCTGGGATCCCAGTCT  
 TCACACAGTAGGACTTCAAATTTGCTTCAGAGCCAGTACCGAAGCTTGGACATGACTGATAACACCAACA  
 GCCAACTGGTAGTACGAGCCAAGTTAACTTCCAGCAGACCAATGAAGATGAACTCTCCTCTCAAAGGG  
 TGATGTATCCATGTACACGAGTGGAGGAAGGAGGCTGGTGGGAGGGCACACACAATGGCAGGACCGGC  
 TGGTTCGCCAGCAACTAGTTCGAGAGATCAAGCCAAGTGAGAAGCCCGTGTACCCAAATCAGGGACCT  
 TGAAGAGCCCTCCCAAAGGGTTCGATACGACTGCCATCAACAAGAGCTATTACAACGTGGTGTACAGAA  
 CATCCTGGAAACAGAGCATGAGTATTCCAAGGAGCTGCAGTCTGTGCTGTCCACCTACCTGCGGCCACTG  
 CAGACCAGTGACAAGTTGAGTTCAGCAAACACTTCATATTTAATGGGAAATCTAGAGGAAATATCTTCTCT  
 TCCAGCAAAGTGTGTACAGTCCCTAGAAGAATGCACGAAGTCTCCTGAAGCCCAACAGAGAGTTGGTGG  
 CTGCTTCTGAGCCTGATGCCGCAGATGAGGACCCTGTACCTCGTTACTGTGCCAACCCCATCTGCT  
 GTGAGCGTCTCACAGACACAGTGAAGGACCTAGGAGAGTTCATGGAAACAAAAGGTGCCAGCAGCCCTG  
 GGAGCTGGAGAGACACATGGAGGATTATCATCCTGATAGACAAGATATTAGAAGTCTATGACGGCCTTC  
 AAAAACCTTTAGCTCAGTGTCAAGAAGTTCGCAAGAGGAAGGAGCTGGAGCTGCAGATCCTGACGGAGC  
 CCATCAGGAGCTGGGAGGGGGATGACATAAAGACCCTGGGCAGTGTACATACATGTCCCAAGTCCACAT  
 TCAGTGTGCGGGAAGCGAGGAGAAGAATGAGAGATACCTCCTGCTCTTCCCAAACCTTCTGCTCATGTTG  
 TCTGCAAGTCCCAGGATGAGTGGTTTCATCTATCAGGGGAAGCTGCCAACACAGGAATGACAATCACAA  
 AGCTTGAGGACAGTGAACACCATAGGAATGCATTTGAGATATCAGGGAGCATGATCGAGCGGATTCTGGT  
 GTCCTGCACCAGCCAGCAGGACTTACACGAGTGGGTGGAACACCTGCAGAAGCAGACGAAGTGCATCT  
 GTGAGCAACCCACCATCAAACCCACTCGGTGCCATCACACACACTTCCCTTCCCATCCTCTCACTCCAT  
 CCAGCAAACACGCGGACAGCAAGCCCGTGGCACTGACGCCTGCGTACCACACACTCCCCACCCCTCTCA  
 CCATGGCACCCACACACCACCATCAGCTGGGGACCCCTGGAGCCTCCGAAGACCCCAAGCCTTGAGC  
 CTGAGTTGCCTGCGGCCTGCACCTCCCCTCCGGCCCTCAGCTGTCTCTGCTACAAGGAGGATCTCAGTA  
 AGAGCCCCAAGACCATGAAAAAGCTGCTGCCGAAGCGCAAGCCCGAGCGGAAGCCTTCGGACGAGGAGTT  
 CGCTGTGCGCAAGAGCACAGCGCGCTGGAAGAAGACGCTCAGATCCTGAAGGTTATCGAAGCTTATTGC  
 ACAAGTGCAAAGACGCGCCAGACCCTGAACTCAACATGGCAAGGCACTGACCTGATGCATAATCACGTCT  
 TGGCTGATGACGACCAATCAAGTCTAGACTCCTTGGGTGTCGAGTGCAGTGCCTTTCTGTTGGAGCCCTC  
 AGACCTCTCGGAAGACTCTGAGTATGACAGTATATGGACAGCCCATAGTTACAGAATGGGTTCTGCATCC  
 CGTAAGAGCTGCTGCTCATATATCTCTCACCAGAACTAA

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Restriction Sites:** SgfI-MluI  
**ACCN:** NM\_001113517  
**Insert Size:** 2349 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](#)

**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\\_001113517.1](#), [NP\\_001106989.1](#)

**RefSeq Size:** 4946 bp

**RefSeq ORF:** 2349 bp

**Locus ID:** 54126

**UniProt ID:** [Q9ES28](#)

**Cytogenetics:** 8 A1.1

**Gene Summary:** Acts as a RAC1 guanine nucleotide exchange factor (GEF) and can induce membrane ruffling. May function as a positive regulator of apoptosis. Functions in cell migration, attachment and cell spreading. Promotes targeting of RAC1 to focal adhesions. Downstream of NMDA receptors and CaMKK-CaMK1 signaling cascade, promotes the formation of spines and synapses in hippocampal neurons (By similarity).[UniProtKB/Swiss-Prot Function]  
 Transcript Variant: This variant (1) represents the longest transcript and encodes the longest protein (isoform a).