

Product datasheet for **MG224943**

Arhgef7 (NM_001113518) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Arhgef7 (NM_001113518) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Arhgef7
Synonyms:	betaPix; betaPix-b; betaPix-c; Cool; cool-1; mKIAA0142; p85Cool1; p85SPR; Pak3bp; PIX
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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ORF Nucleotide Sequence:

>MG224943 representing NM_001113518
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGACTGATAACACCAACAGCCAACTGGTAGTACGAGCCAAGTTAACTCCAGCAGACCAATGAAGATG
 AACTCTCCTTCTCAAAGGGTGATGTCATCCATGTCACACGAGTGGAGGAAGGAGGCTGGTGGGAGGGCAC
 ACACAATGGCAGGACCGGCTGGTCCCAAGCAACTACGTTTCGAGAGATCAAGCCAAGTGAGAAGCCCGTG
 TCACCCAAATCAGGGACCTTGAAGAGCCCTCCCAAAGGGTTCGATACGACTGCCATCAACAAGAGCTATT
 ACAACGTGGTGCTACAGAACATCCTGGAACAGAGCATGAGTATTCGAAGGAGCTGCAGTCTGTGCTGTC
 CACCTACCTGCGGCCACTGCAGACCAGTACAAGTTGAGTTCAGCAAACACTTCATATTTAATGGGAAAT
 CTAGAGGAAATATCTTCCTCCAGCAAGTGCTGTACAGTCCCTAGAAGAATGCACGAAGTCTCCTGAAG
 CCCAACAGAGAGTTGGTGGCTGCTTCTGAGCCTGATGCCGAGATGAGGACCCTGTACCTCGCTTACTG
 TGCCAACCACCCATCTGCTGTGAGCGTCTCACAGAGCACAGTGAAGGACCTAGGAGAGTTTATGGAACA
 AAAGGTGCCAGCAGCCCTGGGATCCTGGTGTGACCACCGGCCTGAGCAAGCCCTTCATGCGCCTGGACA
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 GAAGTCTATGACGGCCTTCAAAAACCTTTCAGCTCAGTGTCAAGAAGTTCGCAAGAGGAAGGAGCTGGAG
 CTGCAGATCCTGACGGAGCCCATCAGGAGCTGGGAGGGGGATGACATAAAGACCTGGGCAGTGTACAT
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 AAACCTTCTGCTCATGTTGTCTGCAAGTCCCAGGATGAGTGGTTTCATCTATCAGGGGAAGCTGCCAACA
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 TACAAGGAGGATCTCAGTAAGAGCCCAAGACCATGAAAAGCTGCTGCCGAAGCGCAAGCCCGAGCGGA
 AGCCTTCGGACGAGGAGTTCGCTGTGCGCAAGAGCACAGCGCGCTGGAAGAAGACGCTCAGATCCTGAA
 GGTATCGAAGCTTATTGCACAAGTCAAAGACGCGCCAGACCCTGAACTCAACATGGCAAGGCACTGAC
 CTGATGCATAATCACGTCTTGGCTGATGACGACCAATCAAGTCTAGACTCCTTGGTTCGTCGAGTAGCC
 TTTCTCGTTTGGAGCCCTCAGACCTCTCGGAAGACTCTGAGTATGACAGTATATGGACAGCCATAGTTA
 CAGAATGGTTCTGCATCCCGTTACGCAAAGAATCTGCTCCACAAGTGTGCTTCCAGAAGAAGAAAAA
 ATTATAGTCGAAGAAACCAAGAGCAATGGGCAGACAGTATAGAGGAAAAGAGCCTCGTGGATACGGTGT
 ATGCGTTAAAGGATGAAGTCCAGGAGTTAAGACAGGATAACAAGAAGATGAAGAAGTCTTAGAGGAGGA
 ACAGAGGGCCCGCAAGGACTTAGAGAAGCTGGTGAAGGAGTTCTAAAGAATATGAACGACCCTGCCTGG
 GATGAGACCAATCTA

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >MG224943 representing NM_001113518
Red=Cloning site Green=Tags(s)

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MTDNTNSQLVVRAKFNFQQTNEDELSFSKGDVIVHTRVEEGGWEGTHNGRTGWFPSNYVREIKPSEKPV
SPKSGTLKSPKGFDDTTANKSYNNVVLQNILETEHEYSKELQSVLSTYLRPLQTSKLSANTSYLMGN
LEEISSFQQVLVQSLEECTKSPEAQQRVGGCFLSLMPQMRTLILAYCANHPSAVSVLTHESEDLGEMET
KGASSPGILVLTGLSKPFMRDLKYPTLLKELERHMEDYHPDRQDIQKSMTAFKNLSAQCCQEVRRKKELE
LQILTEPIRSWEGDDIKTLGSVTYMSQVTIQCAGSEEKNERYLLLPNLLMLLSASPRMSGFIYQGLPT
TGMTITKLEDSENHRNAFEISGSMIERILVSCTSQQDLHEWVEHLQKQTKVTSVSNPTIKPHSVPSHTLP
SHPLTPSSKHADSKPVALTPAYHTLPHPSHHGTPHTTISWGLEPPKTPKPWSLSCLRPAPPLRPSAALC
YKEDLSKSPKTMKLLPKRKRPERKPSDEEFAVRKSTAAL EEDAQILKVI EAYCTSAKTRQTLNSTWQGTD
LMHNHVLADDDQSSLDLGRSSLRLEPSDLSEDSEYDSIWT AHSYRMGSASRSRKESAPQVLLPEEEK
IIVEETKSNQTVIEEKSLVDTVYALKDEVQELRQDNKKMKKSLEEEQRARKDLEKLVKRVLKNMNDPAW
DETNL
    
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TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_001113518

ORF Size: 2115 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_001113518.2](#)

RefSeq Size: 4665 bp

RefSeq ORF: 2118 bp

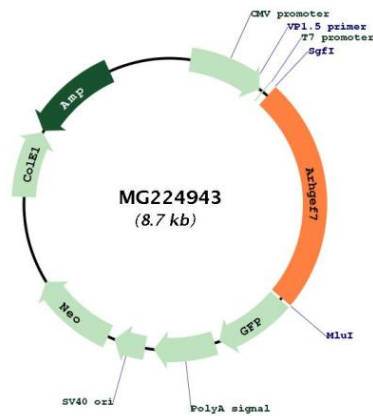
Locus ID: 54126

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]

Product images:



Circular map for MG224943