

Product datasheet for **MG210534**

Arhgap44 (NM_175003) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Arhgap44 (NM_175003) Mouse Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Arhgap44
Synonyms:	6330543G20; AI840762; AU040829; AW493732; Rich2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

**ORF Nucleotide
Sequence:**

>MG210534 representing NM_175003
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAAGAAGCAGTTTAACCGCATGCGCCAGTTGGCCAACCAGACGGTGGGCAGGGCAGAAAAGACTGAAG
 TTCTGAGCGAAGACCTTCTCCAGGTGGAGAAGCGCCTAGAGCTGGTGAAGCAGGTGTCCACAGCACACA
 CAAGAAGCTCACCGCATGTCTGCAGGGTCAAGAGGAGCAGAGGCCGACAAGCGATCAAAAAAGTTGCCT
 CTGACGACTCTGGCGCAGTGCTTGGTGGAGGGTCCGCGATCCTGGGCGATGACACGCTTCTTGGGAAGA
 TGCTGAAGCTCTGCGGAGAGACGGAGGACAAGCTAGCTCAGGAGCTGATCCACTTTGAGCTGCAAGTGGA
 GAGGGATGTGATCGAGCCCTGTTCTGCTCGCTGAGGTGGAAATTCAAATATTCAAAGCAGAGGAAA
 CATTTAGCCAAGCTGGTCTTGACATGGACTCTTCCGGACCAGGTGGCAGCAGACTTCAAAGTCTTCAG
 GGCTTTCCAGCAGCCTTCAGCCTGCGGGTGCCAAAGCCGATGCCCTCAGGGAGGAGATGGAGGAGGCTGC
 CAACAGAGTGGAGATTTGCCGGGACCAGCTTTCTGCTGACATGTACAGTTTTGTGGCCAAAGAAATTGAC
 TATGCAAACACTTTCAAACGCTAATAGAAGTGCAAGCTGAGTACCACAGGAAGTCGCTGACACTGCTGC
 AGGCTGTGTTGCCTCAGATCAAAGCCCAGCAGGAGGCCTGGGTGGAGAAGCCTTCCTTTGGGAAGCCCT
 GGAGGAGCACCTGATGATCAGTGGCCGAGAGATCGCCTTCCTATCGAGGCGTGTGTGACCATGCTGCTG
 GAGTGTGGGATGACAGGAGGAGGGCTCTTCCGGGTAGCCCCCTCAGCCTCCAAGCTGAAGAAGCTGAAAG
 CTGCTCTGGACTGCTGTGTGGTGGATGTCCAGGAGTACTCGGCTGACCCCCACGCCATAGCAGGGGCTTT
 GAAGTCTTATCTCCGAGAGTTGCCAGAGCCTCTTATGACCTTTGAACTCTATGACGAATGGATCCAGGCT
 TCTAATATCCAGGAGCAAGACAAGAGACTTCAGGCTCTCTGGAATGCTTGTGAGAAGTTGCCAAGGCCA
 ACCATAACAACATCAAATACTTGATCAAATTTTTATCGAAACTGTCTGAATATCAGGATGTAACAAGAT
 GACTCCACAGTAACATGGCAATTGTCTGGGACCAATCTCCTTTGGCCACAGTCAGAGGGGAACATCACC
 GAGATGATGACCACAGTTTCCCTGCAGATCGTTGGCATCATCGAGCCATTATCCAGCACGACAGACTGGT
 TCTTCCCTGGAGAGATAGAGTTCAACCTCACAGGCAGTTACGGGAGTCCAGTCCAGTGAACCACAATGC
 CAACTACAGCTCAATGCCCTCCCAGACATGGACCCTGCTGACCGGCGCCAGCCAGAGCAGGCCCCGCCGG
 CCCCTCAGTGTTGCCACAGACAACATGATGCTGGAGTTTTACAAGAAGGATGGCATGGGTGTGAGGGTCA
 TGGACACATCTTGGGTGGCACGAAGAGGCTCCTCTGCTGGTGGAAAGCATCCTGCGCCCCGCCTTCCAT
 GCAGCCTCCTGCCCCACCCTCCGAGCTGGCTGCACCCTTGCCCTCACCCCTGCCGGAGCAGGTCCCAGAC
 AGCCCTGCCACTCCAGCTCCTGCGCTCTCTCCATCAGGTGCCAGCCTGCAGCCCACCCCCGAGCGCCCCA
 GTGTGTCTAAAAGCAAGGAAGTGTGCGCCAGGGTCTGGGCAGAAAGGAAGTCCAGGTTCCATCCAGGGGAC
 ACCCTGCCAGGGACGCAACTGGGGCCACAGCCGGCTGCCAGCCCCAGCCAGCTTCTGACAGACCAGAGT
 CCTCACACCCTCCGAAAGTTTCAAAGAAGGTGGCACCAATTCTCCCAAGGTCCCTTCGTGACGCCAG
 GGACTGTTTCAGATCAGCCCGTTGGCCAGCCATCCCCAGTCAGCCTGTCTCCTACTCCACCAAGCACCCC
 ATCCCCCTATGGACTGAGCTACCTCCAGGCTACTCCATGGCCTCTGGCCAGCTTTCTCTGCCTCAGCT
 CCTCCCCCTGGCCTCTCCCTCTGTCTTTACAAGCACTTTAGCCAAATCTCGGCCACCCCTAAGCCTCGAC
 AGAGGCCACCCCTGCCGCTCCTCAGCCTCCCAGTGTGAGCCTGTGCGCTTCAAGTCCACAGTCCACAGA
 GCACCCCATGTTAGACGGCATGTGCGCCGGGGAAAGCATGTCTACAGCTGTG

ACGCGTACGCGGCGGCTCGAG – GFP Tag – GTTTAA

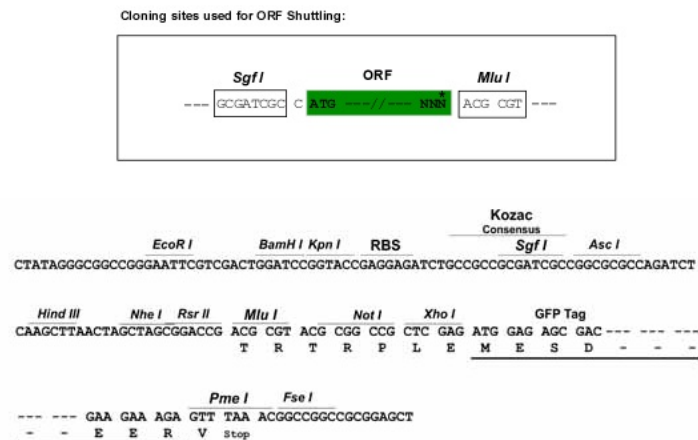
Protein Sequence: >MG210534 representing NM_175003
 Red=Cloning site Green=Tags(s)

MKKQFNMRQLANQTVGRAEKTEVLSEDLLQVEKRLLEVKQVSHSTHKKLTACLQGGQGAEDKRSKKLP
 LTTLAQCLVEGSAILGDDTLLGKMLKLCGETEDKLAQELIHFELQVERDVIEPLFLAEVEIPNIQQRK
 HLAKLVLDMSSRTRWQQTSSKSSGLSSSLQPAGAKADALREEMEEAANRVEICRDQLSADMYSFVAKEID
 YANYFQTLIEVQAEYHRKSLTLLQAVLPQIKAQEAWVEKPSFGKPLEEHLMSGREIAFPIEACVTMLL
 ECGMQEEGLFRVAPSASKLKKLKAALDCCVVDVQEYSADPHAIAGALKSYLRELPEPLMTFELYDEWIQA
 SNIQEQQKRLQALWNACEKLPKANHNHNIKYLKFLSKLSEYQDVNKMTPSNMAIVLGPNNLWPQSEGNIT
 EMMTTVSLQIVGIIIEPIIQHADWFFPGEIEFNLTGSYGSPPVHVHNHANYSSMPSDMDPADRRQPEQARR
 PLSVATDNMMLEFYKKGDMGVRVMDTSVARRGSSAGRKASCAPPSPMQPPAPPSELAAPLPSPLPEQVPD
 SPATPAPALSPSGASLQPTPERPSVSKSKELSPGSGQKSGPSIQGTCPGPTQLGPQPAASPSQLPADQS
 PHTLRKVSKKVAPIPPKVPFVQPGTVSDQPVGQPSVLSPTPPSTPSPYGLSYPPGYSMASGQLSPASA
 PPLASPSVFTSTLAKSRPTPKPRQRPTLPPPQPPSVLSASSPQSTHEPMLDGMSPGESMSTAV

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_175003

ORF Size: 2292 bp

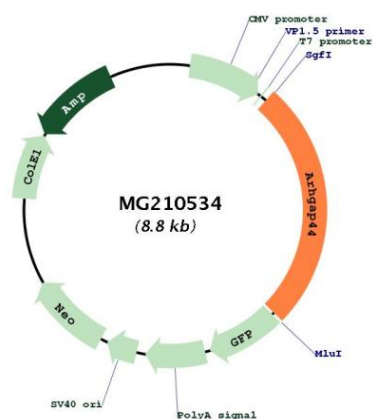
OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially 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:	<u>NM_175003.3, NP_778168.2</u>
RefSeq Size:	4099 bp
RefSeq ORF:	2295 bp
Locus ID:	216831
UniProt ID:	<u>Q5SSM3</u>
Cytogenetics:	11 B3
Gene Summary:	GTPase-activating protein (GAP) that stimulates the GTPase activity of Rho-type GTPases. Thereby, controls Rho-type GTPases cycling between their active GTP-bound and inactive GDP-bound states. Acts as a GAP at least for CDC42 and RAC1 (PubMed:24352656, PubMed:26969129). In neurons, is involved in dendritic spine formation and synaptic plasticity in a specific RAC1-GAP activity (PubMed:23739967, PubMed:24352656, PubMed:26969129). Limits the initiation of exploratory dendritic filopodia. Recruited to actin-patches that seed filopodia, binds specifically to plasma membrane sections that are deformed inward by acto-myosin mediated contractile forces. Acts through GAP activity on RAC1 to reduce actin polymerization necessary for filopodia formation (By similarity). In association with SHANK3, promotes GRIA1 exocytosis from recycling endosomes and spine morphological changes associated to long-term potentiation (PubMed:23739967). [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MG210534