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Product datasheet for MG216207

Arhgap44 (NM_001099288) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Arhgap44 (NM_001099288) 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:

>MG216207 representing NM_001099288
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAAGAAGCAGTTTAACCGCATGCGCCAGTTGGCCAACCAGACGGTGGGCAGGGCAGAAAAGACTGAAG
TTCTGAGCGAAGACCTTCTCCAGGTGGAGAAGCGCCTAGAGCTGGTGAAGCAGGTGTCCCACAGCACACA
CAAGAAGCTCACCGCATGTCTGCAGGGTCAGCAGGGAGCAGAGGCCGACAAGCGATCAAAAAAGTTGCCT
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GGAGGAGCACCTGATGATCAGTGGCCGAGAGATCGCCTTCCCTATCGAGGCGTGTGTGACCATGCTGCTG
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TCCATCCACATAGAGCTGGGGTCAACGCTCCGCCTGAGCCCCCTGGAACATGCACGGCGGCACTCGGCAA
CAGACAAGAGGGACTCGGAAGAGGAGTCTGAGAGTACAGCCCTT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>MG216207 representing NM_001099288
Red=Cloning site Green=Tags(s)

MKKQFNRMRQLANQTVGRAEKTEVLSEDLLQVEKRLELVKQVSHSTHKKLTACLQGQQGAEADKRSKKLP
LTTLAQCLVEGSAILGDDTLLGKMLKLCGETEDKLAQELIHFELQVERDVIEPLFLLAEVEIPNIQKQRK
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SNIQEQDKRLQALWNACEKLPKANHNNIKYLIKFLSKLSEYQDVNKMTPSNMAIVLGPNLLWPQSEGNIT
EMMTTVSLQIVGIIEPIIQHADWFFPGEIEFNLTGSYGSPVHVNHNANYSSMPSPDMDPADRRQPEQARR
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PHTLRKVSKKVAPIPPKVPFVQPGTVSDQPVGQPSPVSLSPTPPSTPSPYGLSYPPGYSMASGQLSPASA
PPLASPSVFTSTLAKSRPTPKPRQRPTLPPPQPPSVSLSASSPQSTEHPMLDGMSPGESMSTDLVHFDVP
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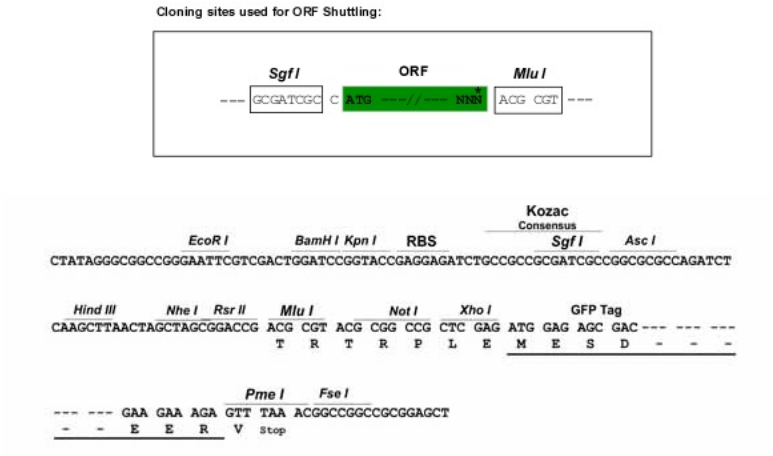
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN:	NM_001099288
ORF Size:	2424 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_001099288.1, NP_001092758.1

RefSeq Size: 4047 bp

RefSeq ORF: 2427 bp

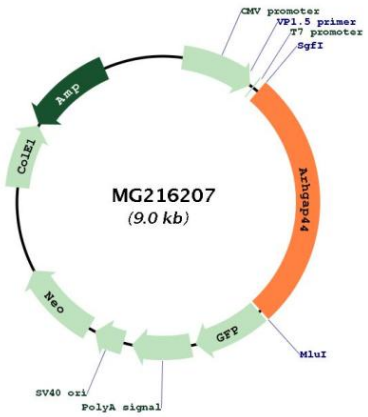
Locus ID: 216831

UniProt ID: Q5SSM3

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 MG216207