OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for MC227612

Arrb2 (NM_001271359) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Arrb2 (NM_001271359) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Arrb2
Synonyms:	AI326910; Arr3; AW122872
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

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Fully Sequenced ORF:

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>MC227612 representing NM_001271359
Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGGAGAAAAACCCGGGACCAGGGTCTTCAAGAAGTCGAGCCCTAACTGCAAGCTCACCGTGTACTTGG
GCAAGCGCGACTTTGTAGATCACCTGGACAAAGTGGACCCTGTGGATGGCGTGGTGCTTGTGGATCCTGA
CTACTTGAAGGACCGGAAAGTGTTCGTGACCCTCACCTGTGCCTTCCGCTATGGCCGAGAAGACCTGGAT
GTACTGGGCCTGTCTTTCCGCAAAGATCTGTTCATCGCCACCTACCAGGCCTTCCCCCCCATGCCCAACC
CACCTCGGCCCCCCACCCGCCTACAGGACCGACTGCTGAAGAAGTTGGGCCAACACGCCCACCCCTTCTT
TTTCACGATACCCCAAAATTTGCCTTGCTCCGTCACACTGCAGCCAGGACCAGAGGACACAGGGAAGGCT
TGTGGAGTAGACTTTGAGATTCGAGCTTTCTGTGCCAAATCAATAGAAGAAAAAAGTCACAAGAGGAACT
CTGTGCGGCTTATCATCAGAAAGGTACAGTTTGCTCCTGAGACACCCGGTCCCCAGCCCTCAGCTGAAAC
CACACGCCACTTCCTCATGTCTGACCGGAGGTCCCTCCACCTAGAGGCTTCCCTGGACAAAGAGCTGTAC
TACCACGGGGAGCCCCTTAATGTCAACGTCCATGTCACCAACAATTCTGCCAAGACCGTCAAGAAGATCA
GAGTGTCTGTGAGACAGTACGCCGACATTTGCCTCTTCAGCACCGCGCAGTACAAGTGTCCCGTGGCTCA
GCTAGAACAAGATGACCAGGTGTCTCCTAGTTCCACGTTCTGCAAGGTGTACACCATCACCCCGCTGCTC
AGTGACAACCGAGAGAAGCGTGGCCTTGCCTTGGATGGGCAGCTCAAACATGAAGACACCAACCTGGCTT
CCAGCACCATTGTGAAGGAGGGAGCCAACAAGGAGGTGCTGGGGATCCTGGTATCCTACAGGGTCAAGGT
GAAGCTGGTGGTGTCTCGAGGCGGAGATGTCTCCGTGGAGCTACCCTTCGTCCTAATGCACCCCAAGCCC
CATGACCACATCACCCTTCCCAGACCCCAGTCAGCGCCCATCCACCCACCCCTTCTCTGCCCTTCAGCCC
CCCGGGAAACAGACGTGCCTGTGGATACCAACCTCATCGAATTCGATACCAACTATGCCACAGACGATGA
CATCGTGTTTGAGGACTTTGCCCGGCTCCGGCTGAAGGGAATGAAGGATGATGACTGTGATGACCAGTTT
TGCTAG

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA
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Restriction Sites: SgfI-MluI

ACCN: NM_001271359

Insert Size: 1266 bp

OTI Disclaimer: Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

OTI Annotation: Clone contains native stop codon, and expresses the complete ORF without any c-terminal tag.

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).

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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_001271359.1, NP_001258288.1

RefSeq Size: 1508 bp

RefSeq ORF: 1266 bp

Locus ID: 216869

UniProt ID: Q91YI4

Cytogenetics: 11 42.99 cM

Gene Summary: Functions in regulating agonist-mediated G-protein coupled receptor (GPCR) signaling by mediating both receptor desensitization and resensitization processes. During homologous desensitization, beta-arrestins bind to the GPRK-phosphorylated receptor and sterically preclude its coupling to the cognate G-protein; the binding appears to require additional receptor determinants exposed only in the active receptor conformation. The beta-arrestins target many receptors for internalization by acting as endocytic adapters (CLASPs, clathrin-associated sorting proteins) and recruiting the GPRCs to the adapter protein 2 complex 2 (AP-2) in clathrin-coated pits (CCPs). However, the extent of beta-arrestin involvement appears to vary significantly depending on the receptor, agonist and cell type. Internalized arrestin-receptor complexes traffic to intracellular endosomes, where they remain uncoupled from G-proteins. Two different modes of arrestin-mediated internalization occur. Class A receptors, like ADRB2, OPRM1, ENDRA, D1AR and ADRA1B dissociate from beta-arrestin at or near the plasma membrane and undergo rapid recycling. Class B receptors, like AVPR2, AGTR1, NTSR1, TRHR and TACR1 internalize as a complex with arrestin and traffic with it to endosomal vesicles, presumably as desensitized receptors, for extended periods of time. Receptor resensitization then requires that receptor-bound arrestin is removed so that the receptor can be dephosphorylated and returned to the plasma membrane. Mediates endocytosis of CCR7 following ligation of CCL19 but not CCL21. Involved in internalization of P2RY1, P2RY4, P2RY6 and P2RY11 and ATP-stimulated internalization of P2RY2. Involved in phosphorylation-dependent internalization of OPRD1 and subsequent recycling or degradation. Involved in ubiquitination of IGF1R. Beta-arrestins function as multivalent adapter proteins that can switch the GPCR from a G-protein signaling mode that transmits short-lived signals from the plasma membrane via small molecule second messengers and ion channels to a beta-arrestin signaling mode that transmits a distinct set of signals that are initiated as the receptor internalizes and transits the intracellular compartment. Acts as signaling scaffold for MAPK pathways such as MAPK1/3 (ERK1/2) and MAPK10 (JNK3). ERK1/2 and JNK3 activated by the beta-arrestin scaffold are largely excluded from the nucleus and confined to cytoplasmic locations such as endocytic vesicles, also called beta-arrestin signalosomes. Acts as signaling

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scaffold for the AKT1 pathway. GPCRs for which the beta-arrestin-mediated signaling relies on both ARRB1 and ARRB2 (codependent regulation) include ADRB2, F2RL1 and PTH1R. For some GPCRs the beta-arrestin-mediated signaling relies on either ARRB1 or ARRB2 and is inhibited by the other respective beta-arrestin form (reciprocal regulation). Increases ERK1/2 signaling in AGTR1- and AVPR2-mediated activation (reciprocal regulation). Involved in CCR7-mediated ERK1/2 signaling involving ligand CCL19. Is involved in type-1A angiotensin II receptor/AGTR1-mediated ERK activity. Is involved in type-1A angiotensin II receptor/AGTR1-mediated MAPK10 activity. Is involved in dopamine-stimulated AKT1 activity in the striatum by disrupting the association of AKT1 with its negative regulator PP2A. Involved in AGTR1-mediated chemotaxis. Appears to function as signaling scaffold involved in regulation of MIP-1-beta-stimulated CCR5-dependent chemotaxis. Involved in attenuation of NF-kappa-B-dependent transcription in response to GPCR or cytokine stimulation by interacting with and stabilizing CHUK. Suppresses UV-induced NF-kappa-B-dependent activation by interacting with CHUK. The function is promoted by stimulation of ADRB2 and dephosphorylation of ARRB2. Involved in IL8-mediated granule release in neutrophils (By similarity). Involved in p53/TP53-mediated apoptosis by regulating MDM2 and reducing the MDM2-mediated degradation of p53/TP53. May serve as nuclear messenger for GPCRs. Upon stimulation of OR1D2, may be invol

Transcript Variant: This variant (2) differs in the 3' UTR, compared to variant 1. Variants 1 and 2 encode the same isoform (a).

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