

Datasheet for ABIN7180123

anti-beta Arrestin 1 antibody (C-Term)[Go to Product page](#)**1** Image

Overview

Quantity:	100 µL
Target:	beta Arrestin 1 (ARRB1)
Binding Specificity:	C-Term
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This beta Arrestin 1 antibody is un-conjugated
Application:	Western Blotting (WB), ELISA

Product Details

Immunogen:	Synthesized peptide derived from C-terminal of Human ARRB1.
Isotype:	IgG
Cross-Reactivity:	Human, Mouse, Rat
Purification:	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

Target Details

Target:	beta Arrestin 1 (ARRB1)
Alternative Name:	ARRB1 (ARRB1 Products)
Background:	Background: 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 GPCRs 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, ENDR, 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. Involved in internalization of P2RY4 and UTP-stimulated internalization of P2RY2. Involved in phosphorylation-dependent internalization of OPRD1 and subsequent recycling. Involved in the degradation of cAMP by recruiting cAMP phosphodiesterases to ligand-activated receptors. 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). ERK1/2 activated by the beta-arrestin scaffold is largely excluded from the nucleus and confined to cytoplasmic locations such as endocytic vesicles, also called beta-arrestin signalosomes. Recruits c-Src/SRC to ADRB2 resulting in ERK activation. 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). Inhibits ERK1/2 signaling in AGTR1- and AVPR2-mediated activation (reciprocal regulation). Is required for SP-stimulated endocytosis of NK1R and recruits c-Src/SRC to internalized NK1R resulting in ERK1/2 activation, which is required for the antiapoptotic effects of SP. Is involved in proteinase-activated F2RL1-mediated ERK activity. Acts as signaling scaffold for the AKT1 pathway. Is involved in alpha-thrombin-stimulated AKT1 signaling. Is involved in IGF1-stimulated AKT1 signaling leading to increased protection from apoptosis. Involved in

Target Details

activation of the p38 MAPK signaling pathway and in actin bundle formation. Involved in F2RL1-mediated cytoskeletal rearrangement and chemotaxis. Involved in AGTR1-mediated stress fiber formation by acting together with GNAQ to activate RHOA. 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. May serve as nuclear messenger for GPCRs. Involved in OPRD1-stimulated transcriptional regulation by translocating to CDKN1B and FOS promoter regions and recruiting EP300 resulting in acetylation of histone H4. Involved in regulation of LEF1 transcriptional activity via interaction with DVL1 and/or DVL2 Also involved in regulation of receptors other than GPCRs. Involved in Toll-like receptor and IL-1 receptor signaling through the interaction with TRAF6 which prevents TRAF6 autoubiquitination and oligomerization required for activation of NF-kappa-B and JUN. Binds phosphoinositides. Binds inositolhexakisphosphate (InsP6) By similarity. Involved in IL8-mediated granule release in neutrophils. Required for atypical chemokine receptor ACKR2-induced RAC1-LIMK1-PAK1-dependent phosphorylation of cofilin (CFL1) and for the up-regulation of ACKR2 from endosomal compartment to cell membrane, increasing its efficiency in chemokine uptake and degradation. Involved in the internalization of the atypical chemokine receptor ACKR3.

Parruti G., J. Biol. Chem. 268:9753-9761(1993).

Yu Q.M., Submitted (AUG-1998) to the EMBL/GenBank/DDBJ databases.

MGC Project Team, Genome Res. 14:2121-2127(2004).

Aliases: ARB1 antibody, ARR1 antibody, ARRB1 antibody, ARRB1_HUMAN antibody, Arrestin 2 antibody, Arrestin beta 1 antibody, Arrestin beta-1 antibody, Beta-arrestin-1 antibody

UniProt:	P49407
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Pathways:	Positive Regulation of Peptide Hormone Secretion , Nuclear Hormone Receptor Binding , cAMP Metabolic Process , Myometrial Relaxation and Contraction , Synaptic Membrane , Regulation of G-Protein Coupled Receptor Protein Signaling , Phototransduction
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Application Details

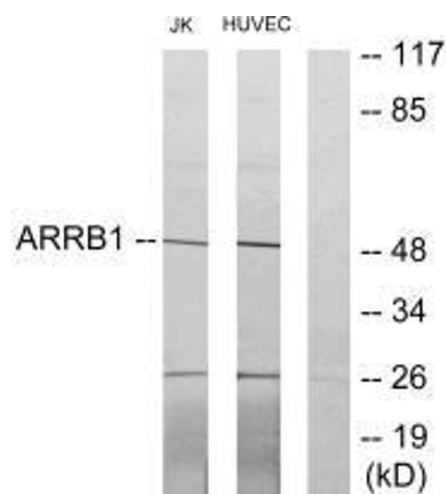
Application Notes:	WB:1:500-1:3000,
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Restrictions:	For Research Use only
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Handling

Format:	Liquid
Buffer:	Rabbit IgG in phosphate buffered saline (without Mg2+ and Ca2+), pH 7.4, 150 mM NaCl, 0.02 % sodium azide and 50 % glycerol.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C,-80 °C
Storage Comment:	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.

Images



Western Blotting

Image 1. Western blot analysis of extracts from Jurkat cells and HUVEC cells, using ARRB1 antibody.