

Rabbit Beta Arrestin 2 Polyclonal Antibody | anti-ARRB2 antibody

Beta Arrestin 2 Antibody

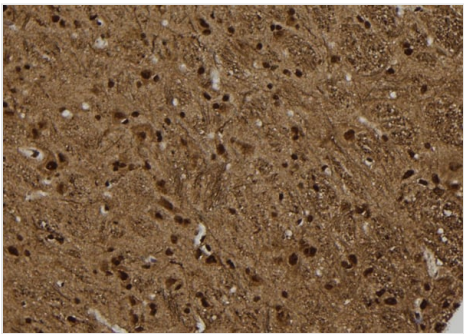
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA327233	Rabbit	Human, Mouse, Rat	ELISA, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

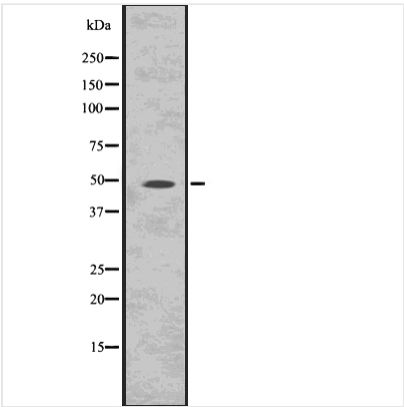
Beta Arrestin 2; Polyclonal Antibody; Beta Arrestin 2 Antibody; ARB 2; ARB2; ARR 2; ARR2; ARRB 2; ARRB2; ARRB2_HUMAN; Arrestin 3; Arrestin beta 2; Arrestin beta-2; BARR2; Beta-arrestin-2; DKFZp686L0365; HGNC:712; anti-ARRB2 antibody

PRODUCT SPECIFICATIONS

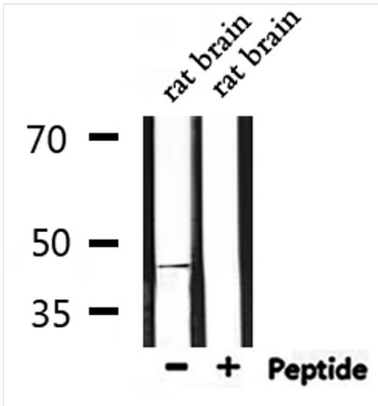
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Beta Arrestin 2 antibody detects endogenous levels of total Beta Arrestin 2
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	430
Applicable Applications for anti-ARRB2 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Beta Arrestin 2
Subcellular Location	Cytoplasm. Nucleus. Cell Membrane. Membrane > Clathrin-Coated Pit. Cell projection > Pseudopodium. Cytoplasmic Vesicle. Translocates to the plasma membrane and colocalizes with antagonist-stimulated GPCRs. The monomeric form is predominantly located in the nucleus. The oligomeric form is located in the cytoplasm. Translocates to the nucleus upon stimulation of OPRD1.
Predicted Cross Reactivity	Bovine, Horse, Sheep, Rabbit, Dog
Similarity	Bovine (88%), Horse (88%), Sheep (88%), Rabbit (88%), Dog (86%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IHC (Immunohistochemisry)
AAA327233 at 1/100 staining Rat brain tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



WB (Western Blot)
Western blot analysis of Beta Arrestin 2 using HUVEC whole cell lysates



WB (Western Blot)
Western blot analysis of extracts from rat brain, using Beta Arrestin 2 Antibody.

Related Product Information for anti-ARRB2 antibody

Function: 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, 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 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 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 involved in regulation of gene expression during the early processes of fertilization. Also involved in regulation of receptors other than GPCRs. Involved in endocytosis of TGFB2 and TGFB3 and down-regulates TGF-beta signaling such as NF-kappa-B activation. Involved in endocytosis of low-density lipoprotein receptor/LDLR. Involved in endocytosis of smoothened homolog/Smo, which also requires GRK2. Involved in endocytosis of SLC9A5. Involved in endocytosis of ENG and subsequent TGF-beta-mediated ERK activation and migration of epithelial cells. 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. Involved in insulin resistance by acting as insulin-induced signaling scaffold for SRC, AKT1 and INSR. Involved in regulation of inhibitory signaling of natural killer cells by recruiting PTPN6 and PTPN11 to KIR2DL1. Involved in IL8-mediated granule release in neutrophils. Involved in the internalization of the atypical chemokine receptor ACKR3.

Subunit Structure: Homooligomer; the self-association is mediated by InsP6-binding (Probable). Heterooligomer with ARRB1; the association is mediated by InsP6-binding. Interacts with ADRB2 AND CHRM2. Interacts with PDE4A. Interacts with PDE4D. Interacts with MAPK10, MAPK1 and MAPK3. Interacts with DRD2. Interacts with FSHR. Interacts with CLTC. Interacts with HTR2C. Interacts with CCR5. Interacts with CXCR4. Interacts with SRC. Interacts with DUSP16; the interaction is interrupted by stimulation of AGTR1 and activation of MAPK10. Interacts with CHUK; the interaction is enhanced stimulation of ADRB2. Interacts with RELA. Interacts with MDM2; the interaction is enhanced by activation of GPCRs. Interacts with SLC9A5. Interacts with TRAF6. Interacts with IGF1R. Interacts with ENG. Interacts with KIR2DL1, KIR2DL3 and KIR2DL4. Interacts with LDLR. Interacts with AP2B1. Interacts with C5AR1. Interacts with RAF1. Interacts with MAP2K1. Interacts with MAPK1. Interacts with MAPK10; the interaction enhances MAPK10 activation by MAP3K5. Interacts with MAP2K4; the interaction is enhanced by presence of MAP3K5 and MAPK10. Interacts with MAP3K5. Interacts with AKT1. Interacts with IKBKB and MAP3K14. Interacts with SMO (activated). Interacts with GSK3A and GSK3B. Associates with protein phosphatase 2A (PP2A) (By similarity). Interacts with DHX8; the interaction is detected in the nucleus upon OR1D2 stimulation. Interacts with GAPDHS; the interaction is detected in the nucleus upon OR1D2 stimulation. Interacts with H2AFX; the interaction is detected in the nucleus upon OR1D2 stimulation. Interacts with KIF14; the interaction is detected in the nucleus upon OR1D2 stimulation. Interacts with RCC1; the interaction is detected in the nucleus upon OR1D2 stimulation. Interacts with CXCR4; the interaction is dependent on C-terminal phosphorylation of CXCR4 and allows activation of MAPK1 and MAPK3. Interacts with GPR143. Interacts with HCK and CXCR1 (phosphorylated). Interacts with ACKR3 and ACKR4. Interacts with ARDC1; the interaction is direct (PubMed:23886940). Interacts with GPR61, GPR62 and GPR135 (PubMed:28827538).

Post-translational Modifications: Phosphorylated at Thr-382 in the cytoplasm; probably dephosphorylated at the plasma membrane. The phosphorylation does not regulate internalization and recycling of ADRB2, interaction with clathrin or AP2B1. The ubiquitination status appears to regulate the formation and trafficking of beta-arrestin-GPCR

NCBI AND UNIPROT INFORMATION

NCBI GI #	382545144
NCBI GeneID	409
NCBI Accession #	NP_001244257.1
NCBI GenBank Nucleotide #	NM_001257328.1
UniProt Accession #	P32121; Q0Z8D3; Q2PP19; Q6ICT3; Q8N7Y2; Q9UEQ6; B4DLW0; B5B0C0; B7WPL3; D3DTK2; H0Y688
Molecular Weight	Observed: 45 kDa Predicted: 47 kDa
NCBI Official Full Name	beta-arrestin-2 isoform 3
NCBI Official Synonym Full Names	arrestin beta 2
NCBI Official Symbol	ARRB2
NCBI Official Synonym Symbols	ARB2; ARR2; BARR2
NCBI Protein Information	beta-arrestin-2
UniProt Protein Name	Beta-arrestin-2
UniProt Gene Name	ARRB2
UniProt Synonym Gene Names	ARB2; ARR2

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/beta-arrestin-2-antibody-immunohistochemistry-western-blot-elisa/327233>