SANTA CRUZ BIOTECHNOLOGY, INC.

β-Arrestin-2 (H-9): sc-13140

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The members of the G protein-coupled receptor family are distinguished by their slow transmitting response to ligand binding. These seven transmembrane proteins include the adrenergic, serotonin and dopamine receptors. The effect of the signaling molecule can be excitatory or inhibitory depending on the type of receptor to which it binds. Members of the β-Arrestin family regulate receptor binding to G proteins. β-Arrestins have been found to be located at postsynaptic sites, where they are thought to act in concert with βARK (βARK1, also designated GRK 2, or βARK2, also designated GRK 3) to regulate G protein-coupled neurotransmitter receptors. Expression of β-Arrestin-1 and β-Arrestin-2 is seen predominantly in spleen and neuronal tissues. It has been shown that β-Arrestin-1 expression is modulated by intracellular cAMP, which may be a novel mechanism for the regulation of receptor-mediated responses.

REFERENCES

1. Hausdorff, W.P., et al. 1990. Two kinases mediate agonist-dependent phosphorylation and desensitization of the β_2-adrenergic receptor. Symp. Soc. Exp. Biol. 44: 225-240.
2. Cotecchia, S., et al. 1990. Multiple second messenger pathways of α-adrenergic receptor subtypes expressed in eukaryotic cells. J. Biol. Chem. 265: 63-69.
3. Attramadal, H., et al. 1992. β-Arrestin-2, a novel member of the Arrestin/β-Arrestin gene family. J. Biol. Chem. 267: 17882-17890.

CHROMOSOMAL LOCATION

Genetic locus: ARRB2 (human) mapping to 17p13.2; Arrb2 (mouse) mapping to 11 B3.

SOURCE

β-Arrestin-2 (H-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-33 at the N-terminus of β-Arrestin-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

β-Arrestin-2 (H-9) is available conjugated to either phycoerythrin (sc-13140 PE), Alexa Fluor® 546 (sc-13140 AF546) or Alexa Fluor® 594 (sc-13140 AF594), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13140 AF680) or Alexa Fluor® 790 (sc-13140 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-13140 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

β-Arrestin-2 (H-9) is recommended for detection of β-Arrestin-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10^6 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

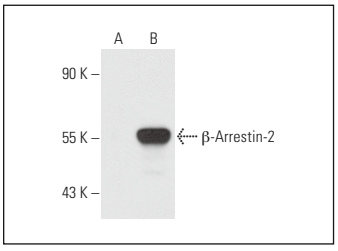
β-Arrestin-2 (H-9) is also recommended for detection of β-Arrestin-2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for β-Arrestin-2 siRNA (h): sc-29208, β-Arrestin-2 siRNA (m): sc-29743, β-Arrestin-2 siRNA (r): sc-63299, β-Arrestin-2 shRNA Plasmid (h): sc-29208-SH, β-Arrestin-2 shRNA Plasmid (m): sc-29743-SH, β-Arrestin-2 shRNA Plasmid (r): sc-63299-SH, β-Arrestin-2 shRNA (h) Lentiviral Particles: sc-29208-V, β-Arrestin-2 shRNA (m) Lentiviral Particles: sc-29743-V and β-Arrestin-2 shRNA (r) Lentiviral Particles: sc-63299-V.

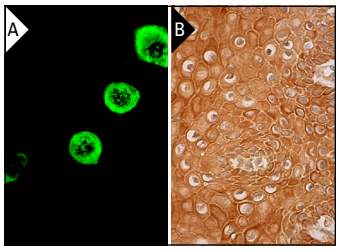
Molecular Weight of β-Arrestin-2: 55 kDa.

Positive Controls: β-Arrestin-2 (h4): 293T Lysate: sc-176570, PC-12 cell lysate: sc-2250 or RAW 264.7 whole cell lysate: sc-2211.

DATA



β-Arrestin-2 (H-9): sc-13140. Western blot analysis of β-Arrestin-2 expression in non-transfected: sc-117752 (**A**) and human β-Arrestin-2 transfected: sc-176570 (**B**) 293T whole cell lysates.



β-Arrestin-2 (H-9): sc-13140. Immunofluorescence staining of methanol-fixed RAW 264.7 cells showing cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human uterine cervix tissue showing clytoplasmic and nuclear staining of squamous epithelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Brooks, H.L., et al. 2003. cDNA array identification of genes regulated in rat renal medulla in response to vasopressin infusion. Am. J. Physiol. Renal Physiol. 284: F218-F228.
2. Eichel, K., et al. 2018. Catalytic activation of β-Arrestin by GPCRs. Nature 557: 381-386.
3. Espinosa-Riquer, Z.P., et al. 2019. TLR4 receptor induces 2-AG-dependent tolerance to lipopolysaccharide and trafficking of CB2 receptor in mast cells. J. Immunol. 202: 2360-2371.

RESEARCH USE

For research use only, not for use in diagnostic procedures.