

β-Arrestin-1 (N-19): sc-6389

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

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- Cotecchia, S., et al. 1990. Multiple second messenger pathways of α-adrenergic receptor subtypes expressed in eukaryotic cells. *J. Biol. Chem.* 265: 63-69.
- Attramadal, H., et al. 1992. β-Arrestin-2, a novel member of the Arrestin/β-arrestin gene family. *J. Biol. Chem.* 267: 17882-17890.
- Dolph, P.J., et al. 1993. Arrestin function in inactivation of G protein-coupled receptor rhodopsin *in vivo*. *Science* 260: 1910-1916.
- Parruti, G., et al. 1993. Molecular analysis of human β-Arrestin-1: cloning, tissue distribution, and regulation of expression. Identification of two isoforms generated by alternative splicing. *J. Biol. Chem.* 268: 9753-9761.
- Barak, L.S., et al. 1995. The conserved seven-transmembrane sequence NP(X)2,3Y of the G protein-coupled receptor superfamily regulates multiple properties of the β 2-adrenergic receptor. *Biochemistry* 34:15407-15414.

CHROMOSOMAL LOCATION

Genetic locus: ARRB1 (human) mapping to 11q13.4, ARRB2 (human) mapping to 17p13.2; Arrb1 (mouse) mapping to 7 E2, Arrb2 (mouse) mapping to 11 B3.

SOURCE

β-Arrestin-1 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of β-Arrestin-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6389 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

β-Arrestin-1 (N-19) is recommended for detection of β-Arrestin-1 and, to a lesser extent, β-Arrestin-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

β-Arrestin-1 (N-19) is also recommended for detection of β-Arrestin-1 and, to a lesser extent, β-Arrestin-2 in additional species, including bovine and porcine.

Molecular Weight of β-Arrestin-1: 55 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Bremnes, T., et al. 2000. Regulation and intracellular trafficking pathways of the endothelin receptors. *J. Biol. Chem.* 275: 17596-17604.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **β-Arrestin-1/2 (A-1): sc-74591** or **β-Arrestin-1/2 (21-B1): sc-53781**, our highly recommended monoclonal alternatives to β-Arrestin-1 (N-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **β-Arrestin-1/2 (A-1): sc-74591**.