

# β-Arrestin-1 (R-19): sc-6390

## 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

- Hausdorff, W.P., et al. 1990. Two kinases mediate agonist-dependent phosphorylation and desensitization of the β2-adrenergic receptor. *Symp. Soc. Exp. Biol.* 44: 225-240.
- 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.

## CHROMOSOMAL LOCATION

Genetic locus: Arrb1 (mouse) mapping to 7 E2.

## SOURCE

β-Arrestin-1 (R-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of β-Arrestin-1 of rat 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-6390 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## RESEARCH USE

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

## APPLICATIONS

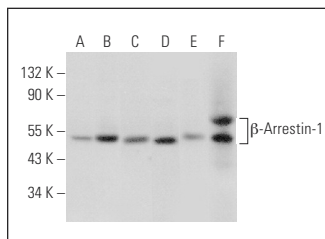
β-Arrestin-1 (R-19) is recommended for detection of β-Arrestin-1 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for β-Arrestin-1 siRNA (m): sc-29742, β-Arrestin-1 siRNA (r): sc-63298, β-Arrestin-1 shRNA Plasmid (m): sc-29742-SH, β-Arrestin-1 shRNA Plasmid (r): sc-63298-SH, β-Arrestin-1 shRNA (m) Lentiviral Particles: sc-29742-V and β-Arrestin-1 shRNA (r) Lentiviral Particles: sc-63298-V.

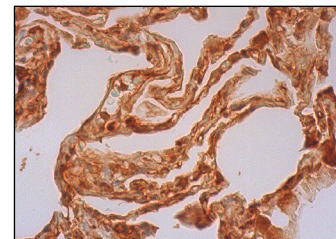
Molecular Weight of β-Arrestin-1: 55 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, AMJ2-C8 whole cell lysate: sc-364366 or PC-12 cell lysate: sc-2250.

## DATA



β-Arrestin-1 (R-19): sc-6390. Western blot analysis of β-Arrestin-1 expression in RAW 264.7 (A), PC-12 (B), KNRK (C) and AMJ2-C8 (D) whole cell lysates and mouse brain (E) and rat lung (F) tissue extracts.



β-Arrestin-1 (R-19): sc-6390. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lung tissue showing cytoplasmic, membrane and nuclear staining of pneumocytes and macrophages.

## SELECT PRODUCT CITATIONS

- Sun, W.Y., et al. 2013. Depletion of β-arrestin2 in hepatic stellate cells reduces cell proliferation via ERK pathway. *J. Cell. Biochem.* 114: 1153-1162.

## PROTOCOLS

See our web site at [www.scbt.com](http://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 (R-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **β-Arrestin-1/2 (A-1): sc-74591**.