SANTA CRUZ BIOTECHNOLOGY, INC.

β-Arrestin-2 (C-18): sc-6387

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.

CHROMOSOMAL LOCATION

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

SOURCE

β-Arrestin-2 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of β-Arrestin-2 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-6387 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.

PROTOCOLS

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

APPLICATIONS

β-Arrestin-2 (C-18) is recommended for detection of β-Arrestin-2 and, to a lesser extent, β-Arrestin-1 of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

β-Arrestin-2 (C-18) is also recommended for detection of β-Arrestin-2 and, to a lesser extent, β-Arrestin-1 in additional species, including equine and bovine.

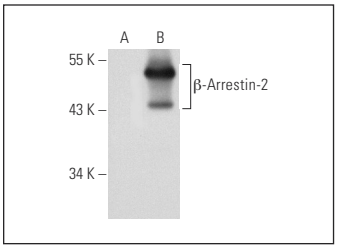
Molecular Weight of β-Arrestin-2: 55 kDa.

Positive Controls: β-Arrestin-2 (h): 293T Lysate: sc-116903.

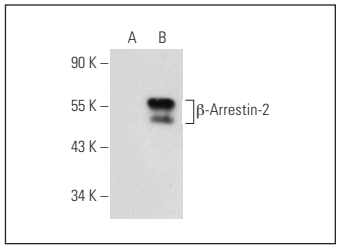
RESEARCH USE

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

DATA



β-Arrestin-2 (C-18): sc-6387. Western blot analysis of β-Arrestin-2 expression in non-transfected: sc-117752 (**A**) and human β-Arrestin-2 transfected: sc-116903 (**B**) 293T whole cell lysates.



β-Arrestin-2 (C-18): sc-6387. Western blot analysis of β-Arrestin-2 expression in non-transfected: sc-117752 (**A**) and human β-Arrestin-2 transfected: sc-176496 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Miggin, S.M., et al. 2003. Palmitoylation of the human prostacyclin receptor. Functional implications of palmitoylation and isoprenylation. J. Biol. Chem. 278: 6947-6958.
2. Ueda, Y., et al. 2006. Deletion of the COOH-terminal domain of CXC chemokine receptor 4 leads to the down-regulation of cell-to-cell contact, enhanced motility and proliferation in breast carcinoma cells. Cancer Res. 66: 5665-5675.
3. Kelley-Hickie, L.P., et al. 2006. Homologous desensitization of signalling by the β isoform of the human thromboxane A2 receptor. Biochim. Biophys. Acta 1761: 1114-1131.
4. Macia, E., et al. 2012. Arf6 negatively controls the rapid recycling of the β2AR. J. Cell Sci. 125: 4026-4035.
5. Chen, W., et al. 2013. Desensitization of G protein-coupled receptors induces vascular hypocontractility in response to norepinephrine in the mesenteric arteries of cirrhotic patients and rats. HBPD INT 12: 295-304.
6. Kliewer, A. and Schulz, S. 2014. Differential regulation of somatostatin receptor dephosphorylation by β-arrestin1 and β-arrestin2. Naunyn Schmiedebergs Arch. Pharmacol. 387: 263-269.
7. Zhao, J., et al. 2014. β-arrestin2/miR-155/GSK3β regulates transition of 5'-azacytizine-induced Sca-1-positive cells to cardiomyocytes. J. Cell. Mol. Med. 18: 1562-1570.