

β_1 -AR (V-19): sc-568

BACKGROUND

β_1 -adrenergic receptors (AR) bind catecholamines (epinephrine, norepinephrine), and influence development, behavior, cardiac function, smooth muscle tone and metabolism. β_1 -ARs are present in the heart, juxtaglomerular cells and in the central and peripheral nervous systems. β_1 -adrenoceptor and β_2 -adrenoceptor couple to G_s proteins to activate adenylyl cyclase. The agonist-specific component of β_1 -AR downregulation requires internalization correlating with receptor degradation, while the cAMP-specific component does not require internalization and is associated with downregulation of β_1 -AR mRNA. Internalization of β_1 -AR is both Arrestin- and Dynamin-dependent and follows the same clathrin-mediated endocytic pathway as β_2 -AR.

CHROMOSOMAL LOCATION

Genetic locus: ADRB1 (human) mapping to 10q25.3; Adrb1 (mouse) mapping to 19 D2.

SOURCE

β_1 -AR (V-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of β_1 -AR of mouse origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-568 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

β_1 -AR (V-19) is recommended for detection of β_1 -AR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

Suitable for use as control antibody for β_1 -AR siRNA (h): sc-29580, β_1 -AR siRNA (m): sc-29581, β_1 -AR shRNA Plasmid (h): sc-29580-SH, β_1 -AR shRNA Plasmid (m): sc-29581-SH, β_1 -AR shRNA (h) Lentiviral Particles: sc-29580-V and β_1 -AR shRNA (m) Lentiviral Particles: sc-29581-V.

Molecular Weight of β_1 -AR: 65 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, Hep G2 cell lysate: sc-2227 or A-431 whole cell lysate: sc-2201.

STORAGE

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

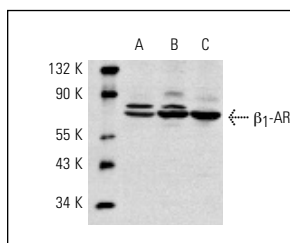
PROTOCOLS

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

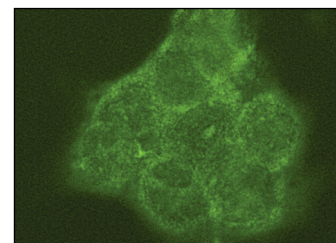
RESEARCH USE

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

DATA



β_1 -AR (V-19): sc-568. Western blot analysis of β_1 -AR expression in SK-N-MC (A), Hep G2 (B) and A-431 (C) whole cell lysates.



β_1 -AR (V-19): sc-568. Immunofluorescence staining of methanol-fixed A-431 cells showing cytoplasmic and membrane staining.

SELECT PRODUCT CITATIONS

- Petrecca, K. and Shrier, A. 1998. Spatial distribution of nerve processes and β -adrenoreceptors in the rat atrioventricular node. *J. Anat.* 192: 517-528.
- Oliver, E., et al. 2009. The impact of α_1 -adrenoceptors up-regulation accompanied by the impairment of β -adrenergic vasodilatation in hypertension. *J. Pharmacol. Exp. Ther.* 328: 982-990.
- Ufer, C. and Germack, R. 2009. Cross-regulation between β_1 - and β_3 -adrenoceptors following chronic β -adrenergic stimulation in neonatal rat cardiomyocytes. *Br. J. Pharmacol.* 158: 300-313.
- Hamdani, N. and van der Velden, J. 2009. Lack of specificity of antibodies directed against human β -adrenergic receptors. *Naunyn Schmiedebergs Arch. Pharmacol.* 379: 403-407.
- Hamdani, N. and van der Velden, J. 2009. Lack of specificity of antibodies directed against human β -adrenergic receptors. *Naunyn Schmiedebergs Arch. Pharmacol.* 379: 403-407.
- Limberg, B.J., et al. 2010. β -Adrenergic receptor subtype expression in myocyte and non-myocyte cells in human female bladder. *Cell Tissue Res.* 342: 295-306.
- Zhang, X.H., et al. 2010. Expression and activation of β -adrenoceptors in the colorectal mucosa of rat and human. *Neurogastroenterol. Motil.* 22: e325-e334.
- Barbuti, A., et al. 2010. Mesoangioblasts from ventricular vessels can differentiate *in vitro* into cardiac myocytes with sinoatrial-like properties. *J. Mol. Cell. Cardiol.* 48: 415-423.
- Gray, N.E., et al. 2012. Angiotensin-like 4 (Angptl4) protein is a physiological mediator of intracellular lipolysis in murine adipocytes. *J. Biol. Chem.* 287: 8444-8456.
- Cheng, J., et al. 2012. CaMKII inhibition in heart failure, beneficial, harmful, or both. *Am. J. Physiol. Heart Circ. Physiol.* 302: H1454-H1465.