

β_2 -AR (H-20): sc-569

BACKGROUND

Adrenergic receptors (ARs) (the term "adrenergic" reflects the alternative name for epinephrine, adrenaline) include four general types (α_1 , α_2 , β_1 and β_2) which are found in different target tissues and differ in their affinities and responses to various agonists and antagonists. cDNA clones have been isolated for all of the major AR subtypes and a number of closely related receptors have been identified by this approach. Each of the receptors have been shown to consist of single polypeptide chains which transverse the plasma membrane seven times, presumably forming a bundle of helices within the membrane. These transmembrane regions are hydrophobic and are interconnected by extracellular and intracellular hydrophilic loops. The coupling of ARs to specific intracellular effectors is mediated through diverse heterotrimeric G proteins and is regulated by G protein-coupled receptor kinases (GRKs), cAMP-dependent protein kinase A and protein kinase C directed phosphorylation. β_2 -adrenergic receptors bind catecholamines (epinephrine, norepinephrine) and influence development, behavior, cardiac function, smooth muscle tone and metabolism. β_2 -AR signaling complexes can contain C L-type calcium channel Ca(V)1.2, G protein, adenylyl cyclase, cAMP-dependent kinase and PP2A phosphatase.

CHROMOSOMAL LOCATION

Genetic locus: ADRB2 (human) mapping to 5q32; Adrb2 (mouse) mapping to 18 E1.

SOURCE

β_2 -AR (H-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of β_2 adrenergic receptor of human 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-569 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

β_2 -AR (H-20) is recommended for detection of β_2 adrenergic receptor 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), 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).

β_2 -AR (H-20) is also recommended for detection of β_2 adrenergic receptor in additional species, including canine and bovine.

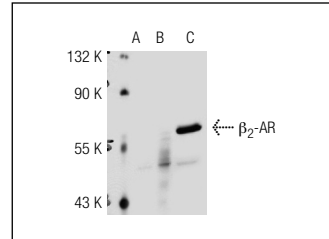
Suitable for use as control antibody for β_2 -AR siRNA (h): sc-39866, β_2 -AR siRNA (m): sc-39867, β_2 -AR shRNA Plasmid (h): sc-39866-SH, β_2 -AR shRNA Plasmid (m): sc-39867-SH, β_2 -AR shRNA (h) Lentiviral Particles: sc-39866-V and β_2 -AR shRNA (m) Lentiviral Particles: sc-39867-V.

Molecular Weight of β_2 -AR: 56-85 kDa.

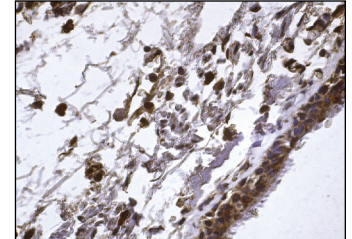
STORAGE

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

DATA



β_2 -AR (H-20): sc-569. Western blot analysis of β_2 -AR expression in non-transfected 293T: sc-117752 (A), human β_2 -AR transfected 293T: sc-112395 (B) and HeLa (C) whole cell lysates.



β_2 -AR (H-20): sc-569. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing cytoplasmic staining of respiratory epithelial cells.

SELECT PRODUCT CITATIONS

- Karoor, V., et al. 1998. Insulin stimulates sequestration of β adrenergic receptors and enhanced association of β adrenergic receptors with Grb2 via tyrosine 350. *J. Biol. Chem.* 273: 33035-33041.
- Mishra, P.K., et al. 2011. Exercise mitigates homocysteine- β_2 -adrenergic receptor interactions to ameliorate contractile dysfunction in diabetes. *Int. J. Physiol. Pathophysiol. Pharmacol.* 3: 97-106.
- Hara, M.R., et al. 2011. A stress response pathway regulates DNA damage through β_2 -adrenoreceptors and β -arrestin-1. *Nature* 477: 349-353.
- Welsh, M., et al. 2011. Smooth muscle cell-specific knockout of androgen receptor: a new model for prostatic disease. *Endocrinology* 152: 3541-3551.
- Pérez Piñero, C., et al. 2012. Involvement of α_2 - and β_2 -adrenoreceptors on breast cancer cell proliferation and tumour growth regulation. *Br. J. Pharmacol.* 166: 721-736.
- Cheng, J., et al. 2012. CaMKII inhibition in heart failure, beneficial, harmful, or both. *Am. J. Physiol. Heart Circ. Physiol.* 302: H1454-H1465.
- Welsh, M., et al. 2012. Androgen receptor signalling in peritubular myoid cells is essential for normal differentiation and function of adult Leydig cells. *Int. J. Androl.* 35: 25-40.

RESEARCH USE

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



MONOS
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Try β_2 -AR (E-3): sc-271322 or β_2 -AR (R11E1): sc-81577, our highly recommended monoclonal alternatives to β_2 -AR (H-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see β_2 -AR (E-3): sc-271322.