

β_2 -AR (H-73): sc-9042

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-73) is a rabbit polyclonal antibody raised against amino acids 338-413 of β_2 -AR of human origin.

PRODUCT

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

APPLICATIONS

β_2 -AR (H-73) is recommended for detection of β_2 -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), 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_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.

Positive Controls: KNRK nuclear extract: sc-2141, A-431 nuclear extract: sc-2122 or IMR-32 nuclear extract: sc-2148.

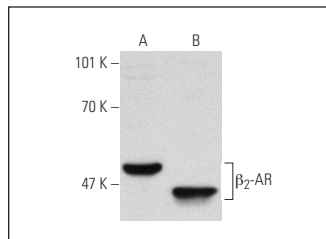
RESEARCH USE

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

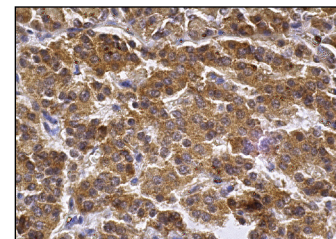
STORAGE

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-73): sc-9042. Western blot analysis of β_2 -AR expression in A-431 (A) and IMR-32 (B) nuclear extracts.



β_2 -AR (H-73): sc-9042. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- de Haij, S., et al. 2003. Steroid responsiveness of renal epithelial cells. Dissociation of transrepression and transactivation. *J. Biol. Chem.* 278: 5091-5098.
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- Barbuti, A., et al. 2010. Mesoangioblasts from ventricular vessels can differentiate *in vitro* into cardiac myocytes with sinoatrial-like properties. *J. Mol. Cell. Cardiol.* 2010. 48: 415-423.
- Ezeamuzie, C.I., et al. 2011. Loss of surface β_2 adrenoceptors accounts for the insensitivity of cultured human monocytes to β_2 adrenoceptor agonists. *Int. Immunopharmacol.* 11: 1189-1194.
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- Abraham, G., et al. 2011. Identification and characterization of β -adrenergic receptors in isolated primary equine tracheal epithelial cells. *Pulm. Pharmacol. Ther.* 24: 174-181.
- Lessard, S.J., et al. 2011. Exercise training reverses impaired skeletal muscle metabolism induced by artificial selection for low aerobic capacity. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 300: R175-R182.
- Shi, Q., et al. 2011. Protective effects of glycyrrhizin against β_2 -adrenergic receptor agonist-induced receptor internalization and cell apoptosis. *Biol. Pharm. Bull.* 34: 609-617.

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-73). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see β_2 -AR (E-3): sc-271322.