

β_3 -AR (C-20): sc-1472

BACKGROUND

β_3 -adrenergic receptors (β_3 -ARs) bind catecholamines (epinephrine, norepinephrine), and primarily regulate lipolysis and thermogenesis in adipose. β_3 -ARs are present in adipose tissues, heart, and in smooth muscle of bladder, colon, small intestine, and stomach. The human corpus cavernosum exhibits basal β_3 -AR-mediated vasorelaxant tone and activity is linked to inhibition of the RhoA/Rho-kinase pathway. β_3 -AR interacts directly with the SH3 domain of Src through proline-rich motifs (PXXP) in the third intracellular loop and the carboxyl terminus.

REFERENCES

1. Danforth, E., Jr., et al. 1997. Obesity and diabetes and the β_3 adrenergic receptor. *Eur. J. Endocrinol.* 136: 362-365.
2. Gros, J., et al. 1999. Expression of human β_3 adrenergic receptor induces adipocyte-like features in CHO/K1 fibroblasts. *J. Cell Sci.* 112: 3791-3797.

CHROMOSOMAL LOCATION

Genetic locus: ADRB3 (human) mapping to 8p11.23.

SOURCE

β_3 -AR (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of β_3 -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.

Blocking peptide available for competition studies, sc-1472 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

β_3 -AR (C-20) is recommended for detection of β_3 -AR receptor of 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_3 -AR siRNA (h): sc-105010, β_3 -AR shRNA Plasmid (h): sc-105010-SH and β_3 -AR shRNA (h) Lentiviral Particles: sc-105010-V.

Molecular Weight of β_3 -AR: 44 kDa.

Molecular Weight of glycosylated β_3 -AR: 68 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

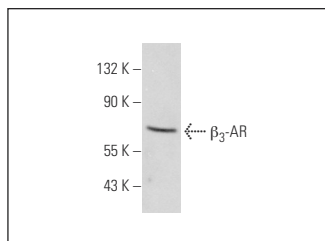
STORAGE

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.

DATA



β_3 -AR (C-20): sc-1472. Western blot analysis of β_3 -AR expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Kathofer, S., et al. 2000. Functional coupling of human 3-adrenoreceptors to the KvLQT1/MinK potassium channel. *J. Biol. Chem.* 275: 26743-26747.
2. Diebold, Y., et al. 2001. Presence of nerves and their receptors in mouse and human conjunctival goblet cells. *Invest. Ophthalmol. Vis. Sci.* 42: 2270-2282.
3. Steinle, J.J., et al. 2003. β_3 -adrenergic receptors regulate retinal endothelial cell migration and proliferation. *J. Biol. Chem.* 278: 20681-20686.
4. Enriquez de Salamanca, A., et al. 2005. Expression of muscarinic and adrenergic receptors in normal human conjunctival epithelium. *Invest. Ophthalmol. Vis. Sci.* 46: 504-513.
5. Adeoya-Osiguwa, S.A., et al. 2006. Identification of functional α_2 - and β -adrenergic receptors in mammalian spermatozoa. *Hum. Reprod.* 21: 1555-1563.
6. Celtek, S., et al. 2007. Demonstration of functional neuronal β_3 -adrenoceptors within the enteric nervous system. *Gastroenterology* 133: 175-183.
7. Schemann, M., et al. 2010. The β_3 -adrenoceptor agonist GW427353 (Solabegron) decreases excitability of human enteric neurons via release of somatostatin. *Gastroenterology* 138: 266-274.
8. Cernecka, H., et al. 2012. Specificity evaluation of antibodies against human β_3 -adrenoceptors. *Naunyn Schmiedebergs Arch. Pharmacol.* 385: 875-882.
9. Dal Monte, M., et al. 2012. β -adrenoceptor agonism influences retinal responses to hypoxia in a model of retinopathy of prematurity. *Invest. Ophthalmol. Vis. Sci.* 53: 2181-2192.

PROTOCOLS

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