

p- β_2 -AR (Ser 355/Ser 356)-R: sc-16719-R

BACKGROUND

β_2 adrenergic receptors (β_2 -ARs) bind catecholamines (epinephrine and norepinephrine) and influence development, behavior, cardiac function, smooth muscle tone, and metabolism. β_2 -AR signaling complexes can contain class C L-type calcium channel CaV1.2, G protein, adenylyl cyclase, cAMP-dependent kinase and PP2A phosphatase. β_2 -ARs are present in adipose, blood, lung, brain, heart, nose, pancreas, skeletal muscle, skin and vessels. Phosphorylation of Ser 345/346 and Ser 355/356 by PKA and GRK, respectively, promotes desensitization of the β_2 -AR.

REFERENCES

- Valiquette, M., et al. 1993. Mutation of Tyrosine 350 impairs the coupling of the β_2 -adrenergic receptor to the stimulatory guanine nucleotide binding protein without interfering with receptor downregulation. *Biochemistry* 32: 4979-4985.
- Valiquette, M., et al. 1995. Mutation of Tyrosine 141 inhibits Insulin-promoted tyrosine phosphorylation and increased responsiveness of the human β_2 -adrenergic receptor. *EMBO J.* 14: 5542-5549.
- Davare, M.A., et al. 2001. A β_2 -adrenergic receptor signaling complex assembled with the Ca²⁺ channel CaV1.2. *Science* 293: 98-101.
- Friedman, J., et al. 2002. β_2 -adrenergic receptor lacking the cyclic AMP-dependent protein kinase consensus sites fully activates extracellular signal-regulated kinase 1/2 in human embryonic kidney 293 cells: lack of evidence for G_s/G_i switching. *Mol. Pharmacol.* 62: 1094-102.
- LocusLink Report. LocusID: 153. <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: ADRB2 (human) mapping to 5q33.1.

SOURCE

p- β_2 -AR (Ser 355/Ser 356)-R is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated 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.

Blocking peptide available for competition studies, sc-16719-R P, (100 μ g 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

p- β_2 -AR (Ser 355/Ser 356)-R is recommended for detection of Ser 355 and Ser 356 dually phosphorylated β_2 -AR of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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_2 -AR siRNA (h): sc-39866, β_2 -AR shRNA Plasmid (h): sc-39866-SH and β_2 -AR shRNA (h) Lentiviral Particles: sc-39866-V.

Molecular Weight of p- β_2 -AR: 68 kDa.

Positive Controls: HeLa-PMA cell lysate: sc-2258.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent) and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

- Marion, S., et al. 2006. A β -arrestin binding determinant common to the second intracellular loops of rhodopsin family G protein-coupled receptors. *J. Biol. Chem.* 281: 2932-2938.
- Drake, M.T., et al. 2008. β -arrestin-biased agonism at the β_2 -adrenergic receptor. *J. Biol. Chem.* 283: 5669-5676.
- Huang, C.C., et al. 2009. A surface of the kinase domain critical for the allosteric activation of G protein-coupled receptor kinases. *J. Biol. Chem.* 284: 17206-17215.

RESEARCH USE

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