SANTA CRUZ BIOTECHNOLOGY, INC.

p-β_2-AR(Tyr 141): sc-17275

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

β2 adrenergic receptors (β2-ARs) bind cathecholamines (epinephrine and norepinephrine) and influence development, behavior, cardiac function, smooth muscle tone, and metabolism. β2-AR signaling complexes can contain class C L-type calcium channel CaV1.2, G protein, adenylyl cyclase, cAMP-dependent kinase and PP2A phosphatase. β2-ARs are present in adipose, blood, lung, brain, heart, nose, pancreas, skeletal muscle, skin and vessels. Phosphoryla-tion of Ser 345/346 and Ser 355/356 by PKA and GRK, respectively, promotes desensitization of the β2-AR.

REFERENCES

1. 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.
2. 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.
3. Davare, M.A., et al. 2001. A β_2-adrenergic receptor signaling complex assembled with the Ca^{2+} channel CaV1.2. Science 293: 98-101.
4. 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.
5. LocusLink Report. LocusID: 153. http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: ADRB2 (human) mapping to 5q33.1; Adrb2 (mouse) mapping to 18 E1.

SOURCE

p-β_2-AR (Tyr 141) is available as either goat (sc-17275) or rabbit (sc-17275-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing phosphorylated Tyr 141 of β_2-AR of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-17275 P, (100 µg 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.

RESEARCH USE

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

APPLICATIONS

p-β_2-AR (Tyr 141) is recommended for detection of Tyr 141 phosphorylated 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 µg per 100-500 µg 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).

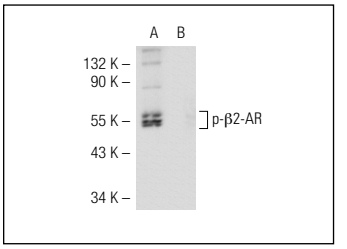
p-β_2-AR (Tyr 141) is also recommended for detection of correspondingly phosphorylated Tyr on β_2-AR in additional species, including equine, canine and avian.

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 p-β_2-AR: 68 kDa.

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

DATA



p-β2-AR (Tyr 141)-R: sc-17275-R. Western blot analysis of β2-AR phosphorylation in PMA treated (**A**) and PMA and lambda protein phosphatase (sc-200312A) treated (**B**) HeLa whole cell lysates.

PROTOCOLS

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