

# p- $\beta_2$ -AR (Tyr 350): sc-16720

## BACKGROUND

$\beta_2$  adrenergic receptors ( $\beta_2$ -ARs) bind catecholamines (epinephrine and norepinephrine) and influence development, behavior, cardiac function, smooth muscle tone, and metabolism.  $\beta_2$ -AR signaling complexes can contain class C L-type calcium channel CaV1.2, G protein, adenylyl cyclase, cAMP-dependent kinase and PP2A phosphatase.  $\beta_2$ -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  $\beta_2$ -AR.

## REFERENCES

- Valiquette, M., et al. 1993. Mutation of Tyrosine 350 impairs the coupling of the  $\beta_2$ -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  $\beta_2$ -adrenergic receptor. *EMBO J.* 14: 5542-5549.
- Davare, M.A., et al. 2001. A  $\beta_2$ -adrenergic receptor signaling complex assembled with the Ca<sup>2+</sup> channel CaV1.2. *Science* 293: 98-101.
- Friedman, J., et al. 2002.  $\beta_2$ -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<sub>s</sub>/G<sub>i</sub> 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 5q31-q32; Adrb2 (mouse) mapping to 18 E1.

## SOURCE

p- $\beta_2$ -AR (Tyr 350) is available as either goat (sc-16720) or rabbit (sc-16720-R) polyclonal affinity purified antibody raised against a short amino acid sequence containing phosphorylated Tyr 350 of  $\beta_2$ -AR of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-16720 P, (100  $\mu$ 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

p- $\beta_2$ -AR (Tyr 350) is recommended for detection of Tyr 350 phosphorylated  $\beta_2$ -AR of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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  $\beta_2$ -AR siRNA (h): sc-39866,  $\beta_2$ -AR shRNA Plasmid (h): sc-39866-SH and  $\beta_2$ -AR shRNA (h) Lentiviral Particles: sc-39866-V.

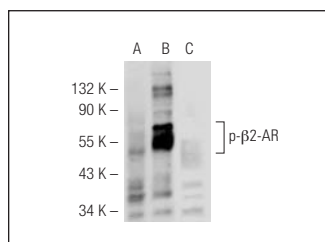
Molecular Weight of p- 2-AR: 68 kDa.

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: for goat primary antibody (sc-14268): use donkey anti-goat IgG-HRP: sc-2020 (range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (range: 1:2000-1:5000), for rabbit primary antibody (sc-14268-R): use goat anti-rabbit IgG-HRP: sc-2004 (range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: for goat primary antibody (sc-14268): use donkey anti-goat IgG-FITC: sc-2024 (range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (range: 1:100-1:400), for rabbit primary antibody (sc-14268-R): use goat anti-rabbit IgG-FITC: sc-2012 (range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



p- $\beta_2$ -AR (Tyr 350)-R: sc-16720-R. Western blot analysis of  $\beta_2$ -AR phosphorylation in untreated (A), PMA treated (B) and PMA and lambda protein phosphatase treated (C) HeLa whole cell lysates.

## RESEARCH USE

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