SANTA CRUZ BIOTECHNOLOGY, INC.

α_{2B}-AR (P-19): sc-31354

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

α_2-adrenergic receptors are members of the G protein-coupled receptor superfamily. They include 3 highly homologous subtypes: α_{2A}, α_{2B}, and α_{2C}. These receptors have a critical role in regulating neurotransmitter release from sympathetic nerves and from adrenergic neurons in the central nervous system. α_{2B}-adrenergic receptors (α_{2B}-AR) couple to G_i-protein and induce salt-dependent hypertension in response to catecholamines. The carboxyl-terminal cytoplasmic domain of α_{2B}-AR can associate with proteins, including the guanine nucleotide exchange factor Elf-2B. α_{2B}-AR transcripts are abundant in rat liver and kidney.

REFERENCES

1. Weinshank, R.L., et al. 1990. Cloning, expression, and pharmacological characterization of a human α_{2B}-adrenergic receptor. Mol. Pharmacol. 38: 681-688.
2. Huang, L., et al. 1996. α_{2B}-adrenergic receptors: immunolocalization and regulation by potassium depletion in rat kidney. Am. J. Physiol. 270: F1015-F1026.
3. Klein, U., et al. 1997. A novel interaction between adrenergic receptors and the α-subunit of eukaryotic initiation factor 2B. J. Biol. Chem. 272: 19099-19102.
4. Small, K.M., et al. 2001. Polymorphic deletion of three intracellular acidic residues of the α_{2B}-adrenergic receptor decreases G protein-coupled receptor kinase-mediated phosphorylation and desensitization. J. Biol. Chem. 276: 4917-4922.
5. Madsen, O., et al. 2002. Molecular evolution of the mammalian α_{2B}-adrenergic receptor. Mol. Biol. Evol. 19: 2150-2160.
6. Kintsurashvili, E., et al. 2003. Central α_{2B}-adrenergic receptor antisense in plasmid vector prolongs reversal of salt-dependent hypertension. J. Hypertens. 21: 961-967.
7. Cussac, D., et al. 2002. α_{2B}-adrenergic receptor activates MAPK via a pathway involving arachidonic acid metabolism, matrix metalloproteinases, and epidermal growth factor receptor transactivation. J. Biol. Chem. 277: 19882-19888.
8. Lin, C.Y., et al. 2003. Conserved motifs in somatostatin, D2-dopamine, and α_{2B}-adrenergic receptors for inhibiting the Na-H exchanger, NHE1. J. Biol. Chem. 278: 15128-15135.
9. Brady, A.E., et al. 2003. Spinophilin stabilizes cell surface expression of α_{2B}-adrenergic receptors. J. Biol. Chem. 278: 32405-32412.

CHROMOSOMAL LOCATION

Genetic locus: ADRA2B (human) mapping to 2q11.1; Adra2b (mouse) mapping to 2 F1.

SOURCE

α_{2B}-AR (P-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of α_{2B}-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-31354 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

α_{2B}-AR (P-19) is recommended for detection of α_{2B} adrenergic receptor of human and, to a lesser extent, mouse and rat 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).

α_{2B}-AR (P-19) is also recommended for detection of α_{2B}-AR adrenergic receptor in additional species, including porcine.

Suitable for use as control antibody for α2B-AR siRNA (h): sc-39864, α_{2B}-AR siRNA (m): sc-39865, α_{2B}-AR shRNA Plasmid (h): sc-39864-SH, α_{2B}-AR shRNA Plasmid (m): sc-39865-SH, α_{2B}-AR shRNA (h) Lentiviral Particles: sc-39864-V and α_{2B}-AR shRNA (m) Lentiviral Particles: sc-39865-V.

Molecular Weight of α_{2B}-AR: 62 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

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