SANTA CRUZ BIOTECHNOLOGY, INC.

α_{2A}-AR (G-14): sc-31356

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

α_{2A} adrenergic receptors (AR) regulate neurotransmitter release from sympathetic nerves in the heart, and from adrenergic neurons in the central nervous system. α_{2A}-AR regulates the phosphorylation of microtubule-associated protein 2, which in turn mediates dendrite growth of cortical neurons. α_{2A}-AR also contributes to feedback inhibition of pain hypersensitivity.

REFERENCES

1. Hein, L., et al. 1999. Two functionally distinct α_{2A} adrenergic receptors regulate sympathetic neurotransmission. Nature 402: 181-184.
2. Song, Z.M., et al. 2004. α_{2A} adrenoceptors regulate phosphorylation of microtubule-associated protein-2 in cultured cortical neurons. Neuroscience 123: 405-418.
3. Mansikka, H., et al. 2004. α_{2A}-adrenoceptors contribute to feedback inhibition of capsaicin-induced hyperalgesia. Anesthesiology 101: 185-190.
4. Ihalainen, J.A., et al. 2004. *In vivo* regulation of dopamine and noradrenaline release by α_{2A}-adrenoceptors in the mouse nucleus accumbens. J. Neurochem 91: 49-56.
5. Ma, D., et al. 2004. Dexmedetomidine produces its neuroprotective effect via the α_{2A}-adrenoceptor subtype. Eur. J. Pharmacol 502: 87-97.
6. Olli-Lahdesmaki, T., et al. 2004. Ligand-induced α2-adrenoceptor endocytosis: relationship to G_i protein activation. Biochem. Biophys. Res. Commun. 321: 226-233.
7. Shishkina, G.T., et al. 2004. Influence of neonatal short-term reduction in brainstem α_{2A}-adrenergic receptors on receptor ontogenesis, acoustic startle reflex, and prepulse inhibition in rats. Behav. Neurosci. 118: 1285-1292.
8. LocusLink Report (LocusID: 150). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: ADRA2A (human) mapping to 10q25.2; Adra2a (mouse) mapping to 19 D2.

SOURCE

α_{2A}-AR (G-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of α_{2A}-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-31356 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.

APPLICATIONS

α_{2A}-AR (G-14) is recommended for detection of alpha$_{2A}$ 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_{2A}-AR (G-14) is also recommended for detection of α_{2A}-AR in additional species, including canine and porcine.

Suitable for use as control antibody for α_{2A}-AR siRNA (h): sc-39862, α_{2A}-AR siRNA (m): sc-39863, α_{2A}-AR shRNA Plasmid (h): sc-39862-SH, α_{2A}-AR shRNA Plasmid (m): sc-39863-SH, α_{2A}-AR shRNA (h) Lentiviral Particles: sc-39862-V and α_{2A}-AR shRNA (m) Lentiviral Particles: sc-39863-V.

Molecular Weight of α_{2A}-AR: 70 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.

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.