SANTA CRUZ BIOTECHNOLOGY, INC.

# $\alpha_{2B}$-AR (C-19): sc-1479

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

## BACKGROUND

$\alpha_2$-adrenergic receptors are members of the G protein-coupled receptor superfamily. They include three highly homologous subtypes: $\alpha_{2A}$, $\alpha_{2B}$, and $\alpha_{2C}$. These receptors have a critical role in regulating neurotransmitter release from sympathetic nerves and from adrenergic neurons in the central nervous system. $\alpha_B$-adrenergic receptors ($a_{2B}$-AR) couple to $G_i$-protein and induce salt-dependent hypertension in response to catecho-lamines. The carboxy-terminal cytoplasmic domain of $a_{2B}$-AR can associate with proteins, including the guanine nucleotide exchange factor eIF-2B. $\alpha_{2B}$-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 $\alpha_{2B}$-adrenergic receptor. Mol. Pharmacol. 38: 681-688.
2. Huang, L., et al. 1996. $\alpha_{2B}$-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 $\alpha$ 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 $\alpha_{2B}$-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 $\alpha_{2B}$-adrenergic receptor. Mol. Biol. Evol. 19: 2150-2160.
6. Cussac, D., et al. 2002. $\alpha_{2B}$-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.
7. Kintsurashvili, E., et al. 2003. Central $\alpha_{2B}$-adrenergic receptor antisense in plasmid vector prolongs reversal of salt-dependent hypertension. J. Hypertens. 21: 961-967.


## CHROMOSOMAL LOCATION

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

## SOURCE

$\alpha_{2B}$-AR (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of $\alpha_{2B}$-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-1479 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

$\alpha_{2B}$-AR (C-19) is recommended for detection of $\alpha_{2B}$-adrenergic receptor of mouse, rat and 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).

$\alpha_{2B}$-AR (C-19) is also recommended for detection of $\alpha_{2B}$ adrenergic receptor in additional species, including equine, canine, bovine and porcine.

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

Molecular Weight of $\alpha_{2B}$-AR: 62 kDa.

## SELECT PRODUCT CITATIONS


1. Kanno, N., et al. 2002. Stimulation of $\alpha_2$-adrenergic receptor inhibits cholangiocarcinoma growth through modulation of Raf-1 and B-Raf activities. Hepatology 35: 1329-1340.
2. Enriquez de Salamanca, A., et al. 2005. Expression of muscarinic and adrenergic receptors in normal human conjunctival epithelium. Invest Ophthalmol. Vis. Sci. 46: 504-513.
3. Vazquez, S.M., et al. 2006. Human breast cell lines exhibit functional $\alpha_2$-adrenoceptors. Cancer Chemother. Pharmacol. 58: 50-61.
4. Adeoya-Osiguwa, S.A., et al. 2006. Identification of functional $\alpha_2$- and $\beta$-adrenergic receptors in mammalian spermatozoa. Hum. Reprod. 21: 1555-1563.
5. Francis, H., et al. 2007. The $\alpha_2$-adrenergic receptor agonist UK 14,304 inhibits secretin-stimulated ductal secretion by downregulation of the cAMP system in bile duct-ligated rats. Am. J. Physiol. Cell Physiol. 293: C1252-C1262.
6. Flierl, M.A., et al. 2007. Phagocyte-derived catecholamines enhance acute inflammatory injury. Nature 449: 721-725.


## 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.