SANTA CRUZ BIOTECHNOLOGY, INC.

Adenosine A1-R (C-19): sc-7500

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Adenosine is involved in a variety of processes, including the synthesis of urea, the anti-inflammatory response, and the inhibition of protein synthesis. The adenosine receptors, including Adenosine A1-R, Adenosine A2A-R, Adenosine A2B-R and Adenosine A3-R, are integral membrane proteins that are members of the G protein-coupled receptor family. The A1-R protein mediates ureagenesis in a partially calcium-dependent manner. Adenosine is known to mediate coronary vasodilation via the A2A-R receptor. Collagen synthesis and total protein synthesis are inhibited in certain cells by adenosine, acting via the A2B receptors. Activation of the A3-R receptor inhibits the induction of the cytokine TNFα and blocks the endotoxin CD14 receptor signal transduction pathway.

CHROMOSOMAL LOCATION

Genetic locus: ADORA1 (human) mapping to 1q32.1; Adora1 (mouse) mapping to 1 E4.

SOURCE

Adenosine A1-R (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Adenosine A1-R 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-7500 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

Adenosine A1-R (C-19) is recommended for detection of Adenosine A1-R 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).

Adenosine A1-R (C-19) is also recommended for detection of Adenosine A1-R in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Adenosine A1-R siRNA (h): sc-39848, Adenosine A1-R siRNA (m): sc-39849, Adenosine A1-R shRNA Plasmid (h): sc-39848-SH, Adenosine A1-R shRNA Plasmid (m): sc-39849-SH, Adenosine A1-R shRNA (h) Lentiviral Particles: sc-39848-V and Adenosine A1-R shRNA (m) Lentiviral Particles: sc-39849-V.

Molecular Weight of Adenosine A1-R: 37 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.

SELECT PRODUCT CITATIONS

1. Lynge, J., et al. 2000. Distribution of adenosine A1, A2A and A2B receptors in human skeletal muscle. Acta Physiol. Scand. 169: 283-290.
2. Adeoya-Osiguwa, S.A., et al. 2002. Capacitation state-dependent changes in adenosine receptors and their regulation of adenylyl cyclase/cAMP. Mol. Reprod. Dev. 63: 245-255.
3. Nguyen, D.K., et al. 2003. Th1 cytokines regulate adenosine receptors and their downstream signaling elements in human microvascular endothelial cells. J. Immunol. 171: 3991-3998.
4. Minelli, A., et al. 2004. Involvement of adenosine A1 receptors in the acquisition of fertilizing capacity. J. Androl. 25: 286-292.
5. Gaytan S.P,, et al. 2006. Effect of postnatal exposure to caffeine on the pattern of adenosine A1 receptor distribution in respiration-related nuclei of the rat brainstem. Auton. Neurosci. 30: 339-346.
6. Edman, M.C., et al. 2008. Functional expression of the adenosine A1 receptor in rabbit lacrimal gland. Exp. Eye Res. 86: 110-117.
7. Tudurí, E., et al. 2008. Inhibition of Ca^{2+} signaling and glucagon secretion in mouse pancreatic α-cells by extracellular ATP and purinergic receptors. Am. J. Physiol. Endocrinol. Metab. 294: E952-E960.
8. Alba, M., et al. 2010. Adenosine A1 receptors contribute to mitochondria vulnerability to pro-oxidant stressors. Mitochondrion 10: 369-379.
9. Mills, J.H., et al. 2011. Human brain endothelial cells are responsive to adenosine receptor activation. Purinergic Signal. 7: 265-273.

PROTOCOLS

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