

Adenosine A2B-R (C-20): sc-7505

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 TNF α and blocks the endotoxin CD14 receptor signal transduction pathway.

REFERENCES

1. Mahan, L.C., et al. 1991. Cloning and expression of an A1 adenosine receptor from rat brain. *Mol. Pharmacol.* 40: 1-7.
2. Furlong, T.J., et al. 1992. Molecular characterization of a human brain adenosine A2 receptor. *Brain Res. Mol. Brain Res.* 15: 62-66.
3. Pierce, K.D., et al. 1992. Molecular cloning and expression of an adenosine A2B receptor from human brain. *Biochem. Biophys. Res. Commun.* 187: 86-93.
4. Salvatore, C.A., et al. 1993. Molecular cloning and characterization of the human A3 adenosine receptor. *Proc. Natl. Acad. Sci. USA* 90: 10365-10369.
5. McWhinney, C.D., et al. 1996. Activation of adenosine A3 receptors on macrophages inhibits tumor necrosis factor- α . *Eur. J. Pharmacol.* 310: 209-216.
6. Guinberg, R., et al. 1997. Ca²⁺ dependence of the response of three adenosine type receptors in rat hepatocytes. *Eur. J. Pharmacol.* 340: 243-247.
7. Belardinelli, L., et al. 1998. The A2A adenosine receptor mediates coronary vasodilation. *J. Pharmacol. Exp. Ther.* 284: 1066-1073.
8. Dubey, R.K., et al. 1998. Adenosine inhibits growth of human aortic smooth muscle cells via A2B receptors. *Hypertension* 31: 516-521.

CHROMOSOMAL LOCATION

Genetic locus: ADORA2B (human) mapping to 17p12.

SOURCE

Adenosine A2B-R (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Adenosine A2B-R of human origin.

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 or our catalog for detailed protocols and support products.

PRODUCT

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

Blocking peptide available for competition studies, sc-7505 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Adenosine A2B-R (C-20) is recommended for detection of Adenosine A2B-R of 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).

Suitable for use as control antibody for Adenosine A2B-R siRNA (h): sc-29642, Adenosine A2B-R shRNA Plasmid (h): sc-29642-SH and Adenosine A2B-R shRNA (h) Lentiviral Particles: sc-29642-V.

Molecular Weight (predicted) of Adenosine A2B-R: 36 kDa.

Molecular Weight (observed) of Adenosine A2B-R: 45 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. and Hellsten, Y. 2000. Distribution of adenosine A1, A2A and A2B receptors in human skeletal muscle. *Acta Physiol. Scand.* 169: 283-290.
2. von Versen-Höyneck, F., et al. 2009. Human placental adenosine receptor expression is elevated in preeclampsia and hypoxia increases expression of the A2A receptor. *Placenta* 30: 434-442.
3. Mills, J.H., et al. 2011. Human brain endothelial cells are responsive to adenosine receptor activation. *Purinergic Signal.* 7: 265-273.

RESEARCH USE

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