SANTA CRUZ BIOTECHNOLOGY, INC.

Adenosine A_{2A}-R (H-82): sc-13937

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 A_1-R, Adenosine A_{2A}-R, Adenosine A_{2B}-R and Adenosine A_3-R, are integral membrane proteins that are members of the G protein-coupled receptor family. The A_1-R protein mediates ureagenesis in a partially calcium-dependent manner. Adenosine is known to mediate coronary vasodilation via the A_{2A}-R receptor. Collagen synthesis and total protein synthesis are inhibited in certain cells by adenosine, acting via the A_{2B} receptors. Activation of the A_3-R receptor inhibits the induction of the cytokine TNFα and blocks the endotoxin CD14 receptor signal transduction pathway.

REFERENCES

1. Mahan, L.C., et al. 1991. Cloning and expression of an A_1 adenosine receptor from rat brain. Mol. Pharmacol. 40: 1-7.
2. Furlong, T.J., et al. 1992. Molecular characterization of a human brain adenosine A_2 receptor. Brain Res. Mol. Brain Res. 15: 62-66.

CHROMOSOMAL LOCATION

Genetic locus: ADORA2A (human) mapping to 22q11.23; Adora2a (mouse) mapping to 10 C1.

SOURCE

Adenosine A_{2A}-R (H-82) is a rabbit polyclonal antibody raised against amino acids 331-412 mapping within a C-terminal cytoplasmic domain of Adenosine A_{2A}-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.

APPLICATIONS

Adenosine A_{2A}-R (H-82) is recommended for detection of Adenosine A_{2A}-R of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 A_{2A}-R (H-82) is also recommended for detection of Adenosine A_{2A}-R in additional species, including canine.

Suitable for use as control antibody for Adenosine A_{2A}-R siRNA (h): sc-39850, Adenosine A_{2A}-R siRNA (m): sc-39851, Adenosine A_{2A}-R shRNA Plasmid (h): sc-39850-SH, Adenosine A_{2A}-R shRNA Plasmid (m): sc-39851-SH, Adenosine A_{2A}-R shRNA (h) Lentiviral Particles: sc-39850-V and Adenosine A_{2A}-R shRNA (m) Lentiviral Particles: sc-39851-V.

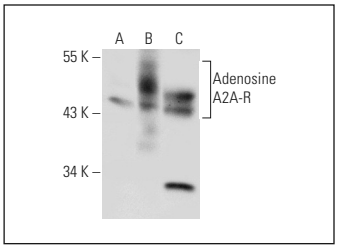
Molecular Weight of Adenosine A_{2A}-R: 45 kDa.

Positive Controls: Adenosine A_{2A}-R (h): 293 Lysate: sc-113350, SH-SY5Y cell lysate: sc-3812 or mouse brain extract: sc-2253.

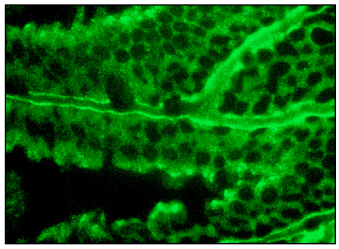
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



Adenosine A2A-R (H-82): sc-13937. Western blot analysis of Adenosine A2A-R expression in non-transfected 293T: sc-117752 (**A**), human Adenosine A2A-R transfected 293T: sc-113350 (**B**) and SH-SY5Y (**C**) whole cell lysate.



Adenosine A_{2A}-R (H-82): sc-13937. Immunofluorescence staining of normal mouse intestine frozen section showing membrane staining.

SELECT PRODUCT CITATIONS

1. Butz, J.A., et al. 2003. Co-expression of molecular chaperones does not improve the heterologous expression of mammalian G protein-coupled receptor expression in yeast. Biotechnol. Bioeng. 84: 292-304.
2. Niebauer, R.T., et al. 2004. Decreases in yeast expression yields of the human adenosine A_{2A} receptor are a result of translational or post-translational events. Protein Expr. Purif. 37: 134-143.
3. Desrosiers, M.D., et al. 2007. Adenosine deamination sustains dendritic cell activation in inflammation. J. Immunol. 179: 1884-1892.
4. Thakur, S., et al. 2010. Inactivation of adenosine A_{2A} receptor attenuates basal and angiotensin II-induced ROS production by Nox2 in endothelial cells. J. Biol. Chem. 285: 40104-40113.

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.