SANTA CRUZ BIOTECHNOLOGY, INC.

Adenosine A2A-R (5H30): sc-70321

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. Adenosine A1-R mediates ureagenesis in a partially calcium-dependent manner. Adenosine is known to mediate coronary vasodilation via Adenosine A2A-R. Collagen synthesis and total protein synthesis are inhibited in certain cells by Adenosine, acting via the A2B receptors. Activation of Adenosine A3-R inhibits the induction of TNFα and blocks the endotoxin CD14 receptor signal transduction pathway.

CHROMOSOMAL LOCATION

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

SOURCE

Adenosine A2A-R (5H30) is a mouse monoclonal antibody raised against full length human recombinant Adenosine A2A receptor, epitope mapping to the third intracellular loop.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Adenosine A2A-R (5H30) is available conjugated to either phycoerythrin (sc-70321 PE) or fluorescein (sc-70321 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

STORAGE

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

APPLICATIONS

Adenosine A2A-R (5H30) is recommended for detection of Adenosine A2A-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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 106 cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

superscript 6

Suitable for use as control antibody for Adenosine A2A-R siRNA (h): sc-39850, Adenosine A2A-R siRNA (m): sc-39851, Adenosine A2A-R shRNA Plasmid (h): sc-39850-SH, Adenosine A2A-R shRNA Plasmid (m): sc-39851-SH, Adenosine A2A-R shRNA (h) Lentiviral Particles: sc-39850-V and Adenosine A2A-R shRNA (m) Lentiviral Particles: sc-39851-V.

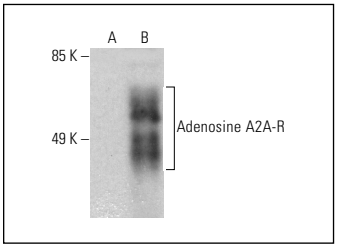
Molecular Weight of Adenosine A2A-R: 45 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, mouse brain extract: sc-2253 or Adenosine A2A-R (h): 293T Lysate: sc-127942.

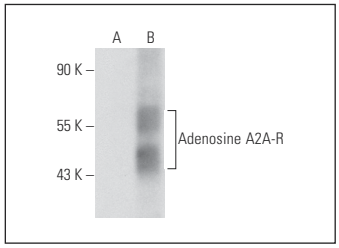
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Adenosine A2A-R (5H30): sc-70321. Western blot analysis of Adenosine A2A-R expression in non-transfected: sc-117752 (**A**) and human Adenosine A2A-R transfected: sc-127942 (**B**) 293T whole cell lysates.



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SELECT PRODUCT CITATIONS

1. Li, P., et al. 2015. Optogenetic activation of intracellular Adenosine A2A receptor signaling in the hippocampus is sufficient to trigger CREB phosphorylation and impair memory. Mol. Psychiatry 20: 1339-1349.
2. Queiroga, C.S., et al. 2016. Paracrine effect of carbon monoxide-astrocytes promote neuroprotection through purinergic signaling in mice. J. Cell Sci. 129: 3178-3188.

RESEARCH USE

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

PROTOCOLS

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

CONJUGATES

See **Adenosine A2A-R (7F6-G5-A2): sc-32261** for Adenosine A2A-R antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.