

# Adenosine A2A-R (7F6-G5-A2): sc-32261

## 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 $\alpha$  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. Salvatore, C.A., et al. 1993. Molecular cloning and characterization of the human A3 Adenosine receptor. *Proc. Natl. Acad. Sci. USA* 90: 10365-10369.

## CHROMOSOMAL LOCATION

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

## SOURCE

Adenosine A2A-R (7F6-G5-A2) is a mouse monoclonal antibody raised against His-tagged full length human recombinant Adenosine A2A receptor, epitope mapping to the third intracellular loop.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Adenosine A2A-R (7F6-G5-A2) is available conjugated to agarose (sc-32261 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32261 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32261 PE), fluorescein (sc-32261 FITC), Alexa Fluor<sup>®</sup> 488 (sc-32261 AF488), Alexa Fluor<sup>®</sup> 546 (sc-32261 AF546), Alexa Fluor<sup>®</sup> 594 (sc-32261 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-32261 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-32261 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-32261 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, Adenosine A2A-R (7F6-G5-A2) is available conjugated to PerCP-Cy5.5 (sc-32261 PCPC5), 100 tests in 2 ml, for IF, IHC(P) and FCM.

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## STORAGE

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

## APPLICATIONS

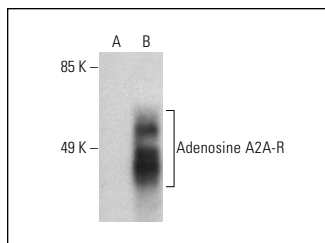
Adenosine A2A-R (7F6-G5-A2) is recommended for detection of Adenosine A2A-R of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting 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  $\mu$ g per 1 x 10<sup>6</sup> cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

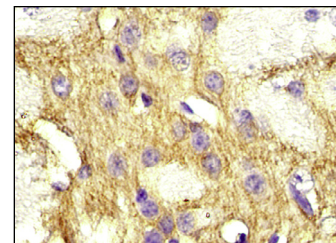
Molecular Weight of Adenosine A2A-R: 45 kDa.

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

## DATA



Adenosine A2A-R (7F6-G5-A2): sc-32261. 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.



Adenosine A2A-R (7F6-G5-A2): sc-32261. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse brain tissue showing membrane localization.

## SELECT PRODUCT CITATIONS

1. Etique, N., et al. 2009. Crosstalk between Adenosine receptor (A2A isoform) and ER $\alpha$  mediates ethanol action in MCF-7 breast cancer cells. *Oncol. Rep.* 21: 977-981.
2. Ramírez-Jarquín, U.N., et al. 2020. The mammalian target of rapamycin (mTOR) kinase mediates haloperidol-induced cataleptic behavior. *Transl. Psychiatry* 10: 336.
3. Rossetto, I.M.U., et al. 2021. Caffeine consumption attenuates ethanol-induced inflammation through the regulation of adenosinergic receptors in the UChB rats cerebellum. *Toxicol. Res.* 10: 835-849.
4. Cornut, D., et al. 2022. Non-ionic cholesterol-based additives for the stabilization of membrane proteins. *Biochimie* 205: 27-39.
5. Godoy-Marín, H., et al. 2023. Increased density of endogenous adenosine A<sub>2A</sub> receptors in atrial fibrillation: from cellular and porcine models to human patients. *Int. J. Mol. Sci.* 24: 3668.

## RESEARCH USE

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