

Adenosine A1-R (HA1): sc-66193

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

REFERENCES

- Mahan, L.C., et al. 1991. Cloning and expression of an A1 Adenosine receptor from rat brain. *Mol. Pharmacol.* 40: 1-7.
- Furlong, T.J., et al. 1992. Molecular characterization of a human brain Adenosine A2 receptor. *Brain Res. Mol. Brain Res.* 15: 62-66.
- 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.
- 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: ADORA1 (human) mapping to 1q32.1; Adora1 (mouse) mapping to 1 E4.

SOURCE

Adenosine A1-R (HA1) is a mouse monoclonal antibody raised against synthetic Adenosine 6-aminocaproic acid.

PRODUCT

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

APPLICATIONS

Adenosine A1-R (HA1) 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), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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.

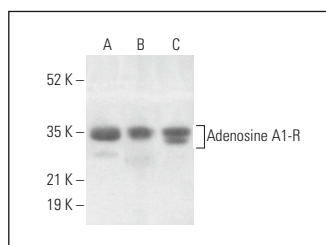
Molecular Weight of Adenosine A1-R: 37 kDa.

Positive Controls: C6 whole cell lysate: sc-364373, NIH/3T3 whole cell lysate: sc-2210 or K-562 whole cell lysate: sc-2203.

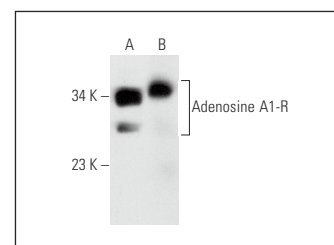
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Adenosine A1-R (HA1): sc-66193. Western blot analysis of Adenosine A1-R expression in K-562 (A), NIH/3T3 (B) and C6 (C) whole cell lysates.



Adenosine A1-R (HA1): sc-66193. Western blot analysis of Adenosine A1-R expression in 293T whole cell lysate (A) and mouse brain tissue extract (B).

SELECT PRODUCT CITATIONS

- Baranowska-Bosiacka, I., et al. 2016. Effects of perinatal exposure to lead (Pb) on purine receptor expression in the brain and gliosis in rats tolerant to morphine analgesia. *Toxicology* 339: 19-33.
- Liu, G., et al. 2018. Adenosine binds predominantly to Adenosine receptor A1 subtype in astrocytes and mediates an immunosuppressive effect. *Brain Res.* 1700: 47-55.
- Merz, J., et al. 2021. Pro- and anti-inflammatory macrophages express a sub-type specific purinergic receptor profile. *Purinergic Signal.* 17: 481-492.
- Shan, L., et al. 2024. Cordycepin improves hyperactivation and acrosome reaction through adenosine receptors during human sperm capacitation *in vitro*. *Reprod. Biol. Endocrinol.* 22: 143.

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.

PROTOCOLS

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