

ProductInformation

ANTI-A₁ ADENOSINE RECEPTOR, Developed In Rabbit, Affinity Isolated Antibody

Product Number **A-268**

Product Description

Anti-A₁ Adenosine Receptor was developed in rabbits using a synthetic peptide (Cys-Gln-Pro-Lys-Pro-Pro-Ile-Asp-Glu-Asp-Leu-Pro-Glu-Glu-Lys-Ala-Glu-Asp), derived from amino acids 309-326 of the rat A₁ adenosine receptor C-terminal domain, as immunogen. The antibody is purified from rabbit serum by epitope affinity chromatography.

Anti-A₁ Adenosine Receptor is specific for A₁ adenosine receptor adenosine receptor subunit. By immunoblotting, it reacts strongly with human and rat, and weakly with bovine A₁. The antibody detects A₁ adenosine receptor in human hippocampus by immunohistology and may be used for immunoprecipitation.

Adenosine receptors (ARs) are members of the 7-transmembrane domain G protein-coupled receptor superfamily. Structural, biochemical and pharmacological analyses of the AR genes and protein has led to the discovery of four distinct AR subtypes (A₁, A_{2a}, A_{2b}, A₃). Activation of ARs mediates several receptor subtype-specific physiological processes including cardiac rate, smooth muscle tone, platelet aggregation, inflammation, cell growth and death, and neurotransmission.

The A₁AR is a glycoprotein of MW 36-40 kDa that can activate G_i and G_o proteins *in vitro*. In intact cells, agonist occupation of the A₁AR has been shown to cause pertussis toxin-sensitive inhibition of adenylyl cyclase activity and, in some systems, a stimulation of phospholipase C resulting in mobilization of intracellular calcium stores. Activation of K⁺ channels by A₁AR has been intensively studied in relation to its dramatic effects on the cardiovascular system. A₁AR protein is highly expressed in brain (especially cerebellum,

hippocampus, thalamus, and cortex) and spinal cord and in part, modulates neurotransmitter release. In white adipocytes, A₁AR inhibits lipolysis and stimulates glucose uptake. Other tissues also express A₁AR including kidney and testis.

Reagents

Anti-A₁ Adenosine Receptor is supplied in solution with phosphate buffered saline containing 1.0 mg/ml BSA and 0.05% sodium azide as a preservative.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, solution may be frozen in working aliquots. Storage in "frost-free" freezers is not recommended. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify by centrifugation before use.

Product Profile

Recommended working dilutions for Anti-A₁ Adenosine Receptor are 1:1,000 for immunoblotting; 1:100 for immunohistology.

References

1. Ciruela, F. et al. J. Neurosci. Res., **42**, 818 (1995).
2. Rivkees, S.A. et al. Brain Res., **677**, 193 (1995).
3. Nakata, H. Biochim. Biophys. Acta, **1177**, 93 (1993).

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