

Product Information

Anti-A_{2A} Adenosine Receptor

Developed In Rabbit
Affinity Isolated Antibody

Product Number **A-269**

Product Description

Anti-A_{2A} Adenosine Receptor was developed in rabbit using a synthetic peptide (Ser-His-Gly-Asp-Met-Gly-Leu-Pro-Asp-Val-Glu-Leu-Leu-Ser-His-Glu-Leu-Lys), derived from amino acids 373-391 of the canine A_{2A} adenosine receptor C-terminal domain, as immunogen. The antibody is purified from rabbit serum by epitope affinity chromatography.

Anti-A_{2A} Adenosine Receptor is specific for A_{2A} adenosine receptor adenosine receptor subtype. By immunoblotting, it reacts strongly with canine A_{2A}. It does not react with rat. The antibody detects A_{2A} 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 A_{2A}AR is a glycoprotein of approximately 45 kDa that can activate adenylyl cyclase via G_s interactions. Stimulation of A_{2A}AR and the resultant accumulation of cAMP inhibits platelet aggregation and in certain vascular beds is associated with vasodilation and drop in blood pressure. A_{2A}AR is reported to interact with D₂ dopamine receptor sites in the brain where they co-express (striatum, olfactory tubercle and nucleus

accumbens). Other tissues including heart, kidney, and lung also express A_{2A}AR.

Reagents

Anti-A_{2A} 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-A_{2A} Adenosine Receptor are 1:2,000 for immunoblotting; 1:100 for immunohistology.

References

1. Marala, R.B. et al. J. Pharmacol. Exp. Ther. **286**, 1051-1057 (1998).
2. Palmer, T.M. et al. Mol. Pharmacol. **45**, 1082-1094 (1994).

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