

Product Specification Sheet

**Adenosine A2a Receptor (A2aR) Antibodies**

**Cat #** A2AR22-M

Mouse Monoclonal Anti-Human A2a receptor IgG, affinity pure

**SIZE:** 100 ug

The purine nucleoside adenosine modulates diverse physiological functions including induction of sedation, vasodilatation, suppression of cardiac rate and contractility, neurotransmitter release, inhibition of platelet aggregation and lipolysis. Adenosine released from cells interacts with membrane receptors (adenosine receptors, ARs). Based upon, biochemical and pharmacological criteria, ARs have been classified into A1, A2a, A2b, and A3. The high affinity receptor A1 inhibits adenylyl cyclase, whereas low affinity receptor A2a stimulates the cyclase via G proteins. A2a receptor is believed to cause vasorelaxation in coronary artery. Various, ARs and their subtypes have recently been cloned from several species. ARs belong to the superfamily of G-protein coupled receptors and predicted to contain 7 transmembrane domains. The N-termini are predicted to be extracellular and the C-termini cytoplasmic. There is an overall 30% homology among the four ARs. ARs are distributed throughout the body. Gene location of various ARs: A1 (Chromosome 1; q.31.3-32.2); A2a (Chromosome 22); A2b (Chromosome 17; p.11.2-12); A3 (Chromosome 1).

**Source of Antigen and Antibodies**

<b>Antigen</b>	Recombinant full length human A2aR fusion protein (gene accession # ADORA2A, P29274)
<b>Epitope Location</b>	~3 <sup>rd</sup> Intracellular loop ~215 aa region
<b>Ab Host/type</b>	Mouse, monoclonal purified IgG2a (cat # A2A22-M) purified over antigen-agarose column
<b>2-ab</b>	Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available)
<b>-ve control</b>	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

**Form & Storage of Antibodies/Peptide Control**

**Affinity pure IgG**

100 ug/100ul solution lyophilized powder  
Supplied in **Buffer:** PBS+0.1% BSA and 50% glycerol

**Storage**

**Short-term:** unopened, undiluted liquid vials at -200C and powder at 4oC or -20oC..

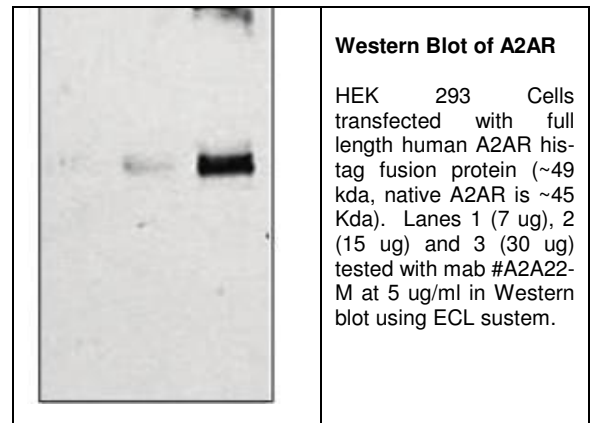
**Long-term:** at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20oC or below.

**Shipping:** 4oC for solutions and room temp for powder

**Recommended Usage**

**Western Blotting** (2-10 ug/ml) using Chemiluminescence technique) A2AR in human ~45 Kda. Tested using recombinant HEK 293 cells transfected with human A2AR cDNA.



**ELISA** (1:10-50K; using 50-100 ng A2aR control protein/well).

**Histochemistry & Immunofluorescence:** not tested. we recommend the use of affinity purified antibody at 10-50 µg/ml on frozen sections of tissues (see published refs using this antibody).

**Specificity & Cross-reactivity**

The A2AR22-M antibody recognizes and epitope on 3<sup>rd</sup> intracellular loop of human A2AR (protein accession #P29274) that is conserved in mouse (protein accession # Q60613), rat (P30543), and dog A2AR (P11617). Antibody crossreactivity in other species has not been studied.

**General References:** (1). Libert, F. et al (1989) Science 244, 569-572; Tucker, AL and Linden, J (1993) Cardiovascular Res. 27, 62-67; Olah, ME and Stile, G (1995) Ann. Rev. Pharmacol. 35, 581-606; (2). Marala, RB and Mustafa, SJ (1998) J Pharm. Exp. Therap. 286, 1051-1057.

**Citations of ADI's antibodies for Adenosine related products** ( see updated list at [www.4adi.com/flr/adenosine.html](http://www.4adi.com/flr/adenosine.html))

\*This product is for In vitro research use only.

**Related material available from ADI**

Antibodies for A1, A2a, A2b, A3 are available.

Western blot Recycling kit (probe same blot with multiple antibodies)

A2AR22-M

100331A

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