ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Adenosine A2b Receptor (A2bR) Antibdies

Cat # A2BR23-P	Human A2bR Control/blocking peptide	**SIZE**: 100 ug
Cat # A2BR23-S	Rabbit Anti-Human A2bR, antiserum	**SIZE**: 100 ul
Cat # A2BR23-A	Rabbit Anti-Human A2bR, IgG Aff. 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 adenyl 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 (Chromos.1).

A2BR: Human, rat, and mouse (332-aa)

Source of Antigen and Antibodies

Antigen	16-aa peptide of Human A2BR/ADORA2B (1) (gene accession # P29275; **Designated (A2BR23-P or control/blocking peptide).**conjugated to KLH.Epitope location ~ Mid-region, Extracellular
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (A2BR23-S) and IgG, purified over antigen-agarose (Cat # A2BR23-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
☐ 100ul ☐ ☐ solution ☐ lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG
☐ 100 ug/100ul ☐ solution ☐ lyophilized powder
Supplied in **Buffer**: PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
☐ 100 ug/100 ul ☐ solution ☐ lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20OC 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 (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure using Chemiluminescence technique). A2bR is about 40 Kda.

ELISA (1:10-50K; using 50-100 ng A2BR control peptide/well).

Histochemistry & Immunofluorescence: we recommend the use of affinity purified antibody at 10-50 μg/ml on frozen sections of tissues.

Specificity & Cross-reactivity

The human A2BR23-P peptide is conserved 87% in rabbit, 81% in canine, 75% in rat, and 62% in mouse A2bR sequences. Antibody to human A2bR shows crossreactivity with mouse and rat A2bR. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at: web site).

General References: (**1**). Pierce, KD et al (1992) BBRC 187, 86-93; Tucker, AL and Linden, J (1993) Cardiovascular Res. 27, 62-67; Olah, ME and Stile, G (1995) Ann. Rev. Pharmacol. 35, 581-606; (**2**) Puffinbarger, NK (1995) Mol. Pharmacol. 47, 1126-1132.

Citations of ADI's antibodies for Adenosine related products

Diniz C 2003, Eur. J Pharmacol. 460, 191-199, IHC,
Rees DA 2002, Endocrinology 143, 2427-2436, IHC,
Zhong H 2004 Am. J. Respir. Cell Mol. Biol., 32, 2-8, WB
Clancy, JP,1999 Am J Phys Cell Phys 276: 361C, WB, IHC, IP,
Chen Y, 2004, Am J Physl Heart Circ Physiol, 287: 2478, WB
Christofi FL 2001 J Comp. Neurol. 439, 46-64, IHC/IF

*This product is for In vitro research use only.

Related material available from ADI

A2bR23-Anti-Adenosine-A2b-Receptor-IgG 150821A