ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Adenosine A2a Receptor (A2aR) Antibodies

Cat # A2aR21-P	Canine A2a receptor Control/blocking peptide	**SIZE**: 100 ug
Cat # A2aR21-S	Rabbit Anti-Canine A2a receptor antiserum	**SIZE**: 100 ul
Cat # A2aR21-A	Rabbit Anti- Canine A2a receptor Ab, 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 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).

Source of Antigen and Antibodies

Antigen	30aa peptide of Canine A2aR/ADORA2A (Gene Accession # P11617) ; **Designated (#A2aR21-P or control peptide)** conjugated to KLH.Epitope location ~ C-terminus, Intracellular
Ab Host/type	Rabbit, polyclonal Unpurified antiserum (**cat # A2aR21-S**) Aff pure IgG1 (**cat #A2aR21-A**) purified over antigen-agarose column
2-ab	**Goat Anti-rabbit IgG-HRP** cat # 20320 (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)
00ul 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) (see published refs using this antibody).

ELISA (1:10-50K; using 50-100 ng A1R control peptide/well).

Histochemistry & Immunofluorescence: 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 canine A2aR21-P peptide is conserved 80% in human, 76% in chimp, horse, 72% in chicken, 71% in pig, 62% in rabbit, 43% in rat A2aR. Antibody to canine A2aR21-P has been shown to crossreact with human, bovine, rat, and pig A2a receptors. 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). 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)

*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)

A2aR21-S-A-P 100119A

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