

Product Specification Sheet

Adenosine A2a Receptor (A2aR) Protein Positive Control

Cat # A2aR21- Cb **Bovine brain A2a receptor protein WB +ve control** **SIZE:** 100 ul
FORM: Sol n **Lyophilized**

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 positive control

Bovine brain A2aR protein for Western blot +ve control (**Cat # A2AR21-Cb**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **A2AR21-Cb** for good visibility with antibody Cat # **A2ar21-S** or **A2aR21-A**. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **A2AR21-Cb** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly.

Form & Storage of Antibodies/Peptide Control

Storage

Short-term: unopened, undiluted liquid vials for less than a week at 4oC.

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.

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

(2) Citations of ADI's Antibodies (see web site for updated list)

Diniz C 2003 Eur. J. Pharmacol. 460, 191-199, IHC, Clancy, JP, 1999, AJP Cell Physiol 276: 361C, WB, IHC, IP, Nie Z, 1999, Mol. Pharmacol. 56: 947-954, WB, Marala, RB, 1998, J. Pharmacol. Exp. Ther. 286: 1051, WB, Yip L, 2004, J. Pharmacol. Exp. Ther. 309: 804 – 815, IHC Chen Y, 2004, Am J Physiol Heart Circ Physiol, 287: 2478, WB Trincavelli, M L., 2004, J Neurochem. 91, 1180-1190, WB, IF, IP Kamiya T 2003, BBRC 306, 544-549, WB, IHC IF IP

*This product is for In vitro research use only.

Related material available from ADI

Antibodies for A1, A2a, A2b and A3R

A2aR21-Cb 80505A