abcam

Product datasheet

# Anti-Adenosine A1 Receptor antibody ab3460

4 References 3 Images

## Overview

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|---|---|
| **Product name** | Anti-Adenosine A1 Receptor antibody |
| **Description** | Rabbit polyclonal to Adenosine A1 Receptor |
| **Host species** | Rabbit |
| **Specificity** | Detects Adenosine Receptor A1. This antibody does not detect other AR subtypes. |
| **Tested applications** | **Suitable for:** WB, ICC, IHC-P |
| **Species reactivity** | **Reacts with:** Rat, Human<br>**Predicted to work with:** Cow |
| **Immunogen** | Synthetic peptide corresponding to Rat Adenosine A1 Receptor aa 309-326.<br>Sequence:<br>CQPKPPIDEDLPEEKAED<br>(Peptide available as **ab5893**)<br>Run BLAST with Run BLAST with |
| **Positive control** | WB: PC-12, SH-SY5Y, U-87MG, A549, K-562 whole cell lysates. ICC: HeLa cells IHC: rat brain tissue. |
| **General notes** | The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.<br>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As |

## Properties

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| **Form** | Liquid |
| **Storage instructions** | Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle. |
| **Storage buffer** | Preservative: 0.05% Sodium azide<br>Constituents: 99% PBS, 0.1% BSA |
| **Purity** | Immunogen affinity purified |

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| **Primary antibody notes** | 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, A2a, A2b, A3). Activation of ARs mediates several receptor subtype-specific physiological processes that include cardiac rate, smooth muscle tone, platelet aggregation, inflammation, cell growth and death, and neurotransmission. The A1AR is a glycoprotein that can activate Gi and Go proteins in vitro. In intact cells, agonist occupation of the A1AR has been shown to cause pertussis toxin-sensitive inhibition of adenylyl cyclase activity and, in some systems, a stimulation of phospholipase C resulting in mobilization of intracellular calcium stores. Activation of potassium channels by A1AR has been intensively studied in relation to its dramatic effects on the cardiovascular system. A1AR protein is highly expressed in brain (especially cerebellum, hippocampus, thalamus, and cortex) and spinal cord and in part, modulates neurotransmitter release. In white adipocytes A1AR inhibits lipolysis and stimulates glucose uptake. Other tissues also express A1AR including kidney and testis. |
| **Clonality** | Polyclonal |
| **Isotype** | IgG |

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab3460 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

| Application | Abreviews | Notes |
|---|---|---|
| **WB** | | 1/500. Predicted molecular weight: 37 kDa.Can be blocked with **Adenosine A1 Receptor peptide (ab5893)**. |
| **ICC** | | Use a concentration of 2 µg/ml. |
| **IHC-P** | | 1/50 - 1/200. |

## Target

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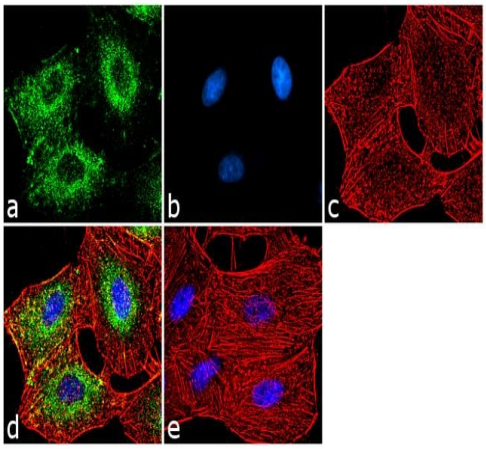
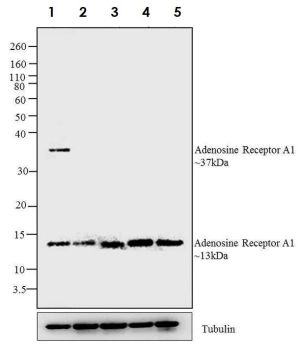
| **Function** | Receptor for adenosine. The activity of this receptor is mediated by G proteins which inhibit adenylyl cyclase. |
| **Sequence similarities** | Belongs to the G-protein coupled receptor 1 family. |
| **Cellular localization** | Cell membrane. |

## Images




Immunocytochemistry - Anti-Adenosine A1 Receptor antibody (ab3460)

Immunocytochemical analysis of 4% paraformaldehyde-fixed, 0.1% Triton™ X-100 permeabilized HeLa cells staining adenosine A1 receptor with ab3460 at 2 µg/ml and labeled with Goat anti-Rabbit IgG (H+L) Superclonal™ Secondary Antibody, Alexa Fluor® 488 conjugate at 1/2000 dilution (green). Nuclei are stained with SlowFade® Gold Antifade Mountant with DAPI (blue) and F-actin is stained with Alexa Fluor® 555 Rhodamine Phalloidin (red). Negative control contains no primary anibody.




Western blot - Anti-Adenosine A1 Receptor antibody (ab3460)

**All lanes :** Anti-Adenosine A1 Receptor antibody (ab3460) at 1/250 dilution

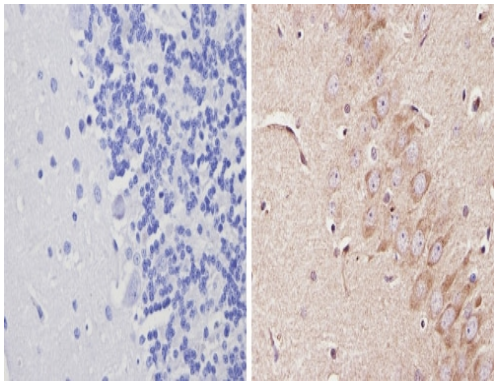
**Lane 1 :** PC-12 whole cell extract
**Lane 2 :** SH-SY5Y whole cell extract
**Lane 3 :** U-87 MG whole cell extract
**Lane 4 :** A549 whole cell extract
**Lane 5 :** K-562 whole cell extract

Lysates/proteins at 30 µg per lane.

**Secondary**
**All lanes :** Goat Anti-Rabbit IgG Secondary Antibody, HRP conjugate at 1/5000 dilution

Developed using the ECL technique.

**Predicted band size:** 37 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Adenosine A1 Receptor antibody (ab3460)

ab3460 labelling Adenosine A1 receptor in the cytoplasm of Rat brain tissue (right) compared with a negative control (left) by Immunohistochemistry (formalin/PFA-fixed paraffin embedded sections). To expose target proteins, antigen retrieval method was performed using 10mM sodium citrate (pH 6.0) microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature. Tissue sections were incubated with the primary antibody (1:100 in 3% BSA-PBS) overnight at 4°C. A HRP-conjugated anti-rabbit IgG was used as the secondary antibody, followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



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