

## Product datasheet

# Anti-AK2 antibody ab228786

5 Images

### Overview

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<b>Product name</b>	Anti-AK2 antibody
<b>Description</b>	Rabbit polyclonal to AK2
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P, ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Rat, Human <b>Predicted to work with:</b> Mouse, Cow, Rhesus monkey 
<b>Immunogen</b>	Recombinant fragment within Human AK2 (internal sequence). The exact sequence is proprietary. Database link: <a href="#">P54819</a>
<b>Positive control</b>	WB: NCH1299 and HepG2 whole cell lysates. IHC-P: Rat liver tissue; NCIN87 xenograft tissue. ICC/IF: HeLa cells.
<b>General notes</b>	<p>Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.</p> <p>Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.</p> <p>We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications &amp; species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise™ guarantee.</p> <p>In preparation for this, we have started to update the applications &amp; species that this product is Abpromise guaranteed for.</p> <p>We are also updating the applications &amp; species that this product has been “predicted to work with,” however this information is not covered by our Abpromise guarantee.</p> <p>Applications &amp; species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.</p> <p>Please check that this product meets your needs before purchasing. 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, as well as customer reviews and Q&amp;As.</p>

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.00 Preservative: 0.01% Thimerosal (merthiolate) Constituents: 1.21% Tris, 0.75% Glycine, 10% Glycerol (glycerin, glycerine)
<b>Purity</b>	Immunogen affinity purified
<b>Clonality</b>	Polyclonal
<b>Isotype</b>	IgG

## Applications

Our [Abpromise guarantee](#) covers the use of **ab228786** in the following tested applications.

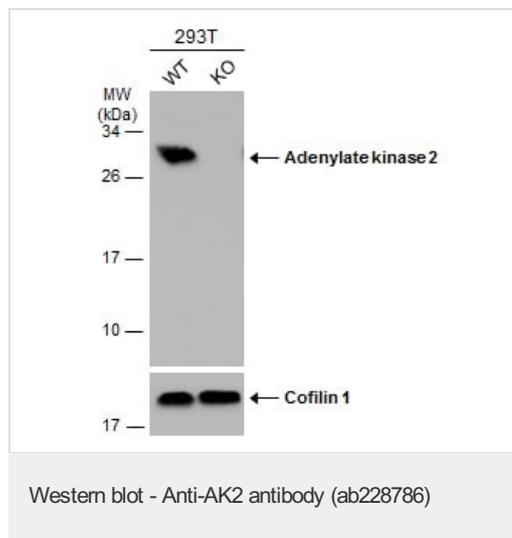
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/500 - 1/3000. Predicted molecular weight: 26 kDa.
IHC-P		1/100 - 1/1000.
ICC/IF		1/100 - 1/1000.

## Target

<b>Function</b>	Catalyzes the reversible transfer of the terminal phosphate group between ATP and AMP. This small ubiquitous enzyme involved in energy metabolism and nucleotide synthesis that is essential for maintenance and cell growth. Plays a key role in hematopoiesis.
<b>Tissue specificity</b>	Present in most tissues. Present at high level in heart, liver and kidney, and at low level in brain, skeletal muscle and skin. Present in thrombocytes but not in erythrocytes, which lack mitochondria. Present in all nucleated cell populations from blood, while AK1 is mostly absent. In spleen and lymph nodes, mononuclear cells lack AK1, whereas AK2 is readily detectable. These results indicate that leukocytes may be susceptible to defects caused by the lack of AK2, as they do not express AK1 in sufficient amounts to compensate for the AK2 functional deficits (at protein level).
<b>Involvement in disease</b>	Defects in AK2 are the cause of reticular dysgenesis (RDYS) [MIM:267500]; also known as aleukocytosis. RDYS is the most severe form of inborn severe combined immunodeficiencies (SCID) and is characterized by absence of granulocytes and almost complete deficiency of lymphocytes in peripheral blood, hypoplasia of the thymus and secondary lymphoid organs, and lack of innate and adaptive humoral and cellular immune functions, leading to fatal septicemia within days after birth. In bone marrow of individuals with reticular dysgenesis, myeloid differentiation is blocked at the promyelocytic stage, whereas erythro- and megakaryocytic maturation is generally normal. In addition, affected newborns have bilateral sensorineural deafness. Defects may be due to its absence in leukocytes and inner ear, in which its absence can not be compensated by AK1.
<b>Sequence similarities</b>	Belongs to the adenylate kinase family. AK2 subfamily.

## Images



**All lanes :** Anti-AK2 antibody (ab228786) at 1/1000 dilution

**Lane 1 :** WT 293T cell extracts

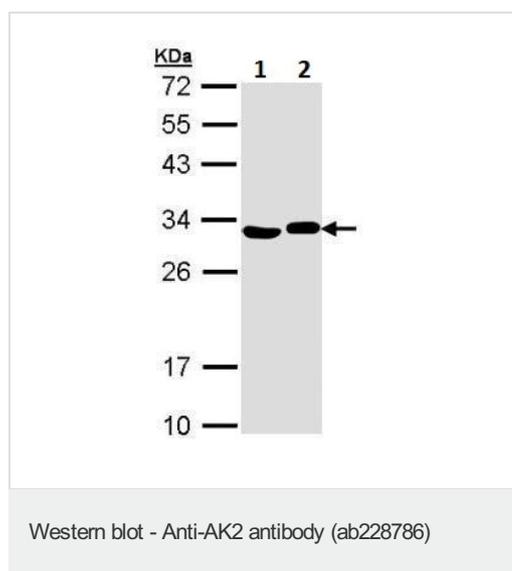
**Lane 2 :** AK2 Knockout 293T cell extracts

Lysates/proteins at 30 µg per lane.

### Secondary

**All lanes :** HRP-conjugated anti-rabbit IgG

**Predicted band size:** 26 kDa



**All lanes :** Anti-AK2 antibody (ab228786) at 1/1000 dilution

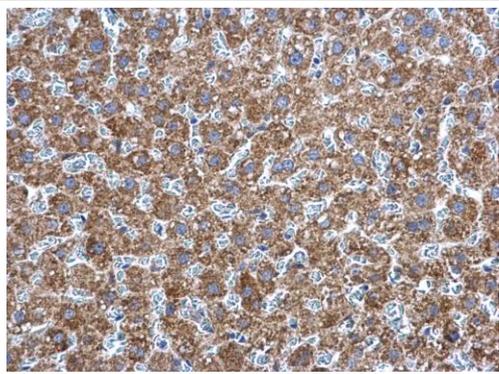
**Lane 1 :** NCI-H1299 (human lung carcinoma cell line) whole cell lysate

**Lane 2 :** HepG2 (human liver hepatocellular carcinoma cell line) whole cell lysate

Lysates/proteins at 30 µg per lane.

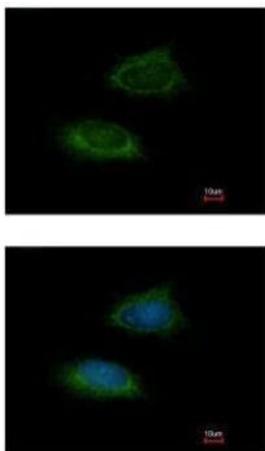
**Predicted band size:** 26 kDa

12% SDS-PAGE gel.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AK2 antibody (ab228786)

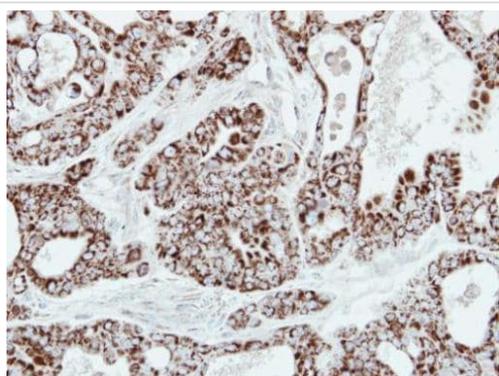
Paraffin-embedded rat liver tissue stained for AK2 using ab228786 at 1/500 dilution in immunohistochemical analysis.



Immunocytochemistry/ Immunofluorescence - Anti-AK2 antibody (ab228786)

Methanol-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) stained for AK2 (green) using ab228786 at 1/200 dilution in ICC/IF.

Blue: Hoechst 33342 staining.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AK2 antibody (ab228786)

Paraffin-embedded NCIN87 xenograft stained for AK2 using ab228786 at 1/500 dilution in immunohistochemical analysis.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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