

Product datasheet

Anti-AK2 antibody ab228801

KO VALIDATED

7 Images

Overview

Product name	Anti-AK2 antibody
Description	Rabbit polyclonal to AK2
Host species	Rabbit
Tested applications	Suitable for: ICC/IF, IHC-P, WB
Species reactivity	Reacts with: Mouse, Rat, Human Predicted to work with: Cow, Rhesus monkey 
Immunogen	Recombinant fragment within Human AK2 (internal sequence). The exact sequence is proprietary. Database link: P54819
Positive control	WB: Mouse brain lysate; MOLT-4 whole cell lysate. IHC-P: Rat ovary and pancreas tissue; Cal27 xenograft tissue. ICC/IF: HeLa cells.

Properties

Form	Liquid
Storage instructions	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.
Storage buffer	pH: 7.00 Preservative: 0.01% Thimerosal (merthiolate) Constituents: 1.21% Tris, 0.75% Glycine, 20% Glycerol
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab228801** in the following tested applications.

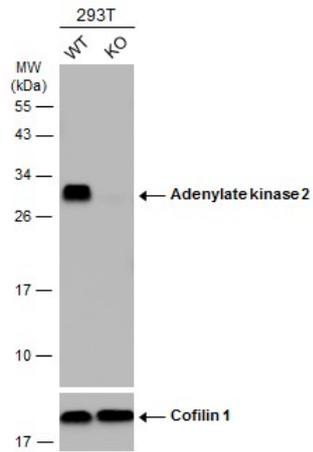
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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

Target

Function	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.
Tissue specificity	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).
Involvement in disease	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.
Sequence similarities	Belongs to the adenylate kinase family. AK2 subfamily.
Cellular localization	Mitochondrion intermembrane space.

Images



Western blot - Anti-AK2 antibody (ab228801)

All lanes : Anti-AK2 antibody (ab228801) at 1/1000 dilution

Lane 1 : WT 293T cell extracts

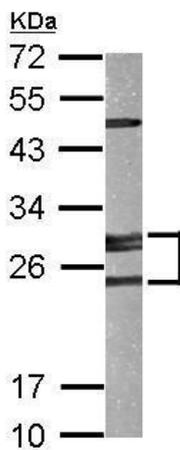
Lane 2 : AK2 Knockout 293T cell extracts

Lysates/proteins at 30 µg per lane.

Secondary

All lanes : HRP-conjugated anti-rabbit IgG

Predicted band size: 26 kDa

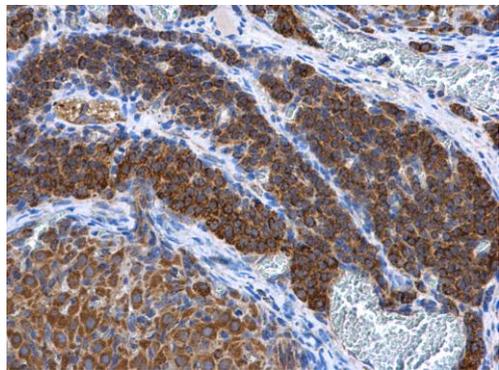


Western blot - Anti-AK2 antibody (ab228801)

Anti-AK2 antibody (ab228801) at 1/1000 dilution + Mouse brain lysate at 50 µg

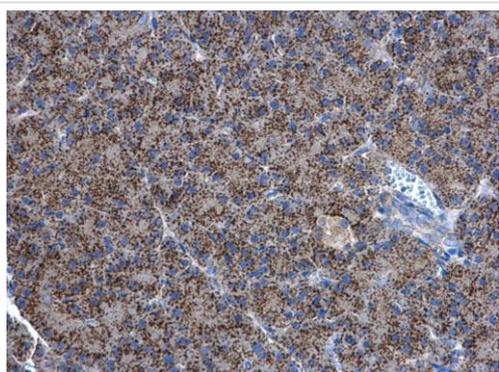
Predicted band size: 26 kDa

12% SDS-PAGE gel.



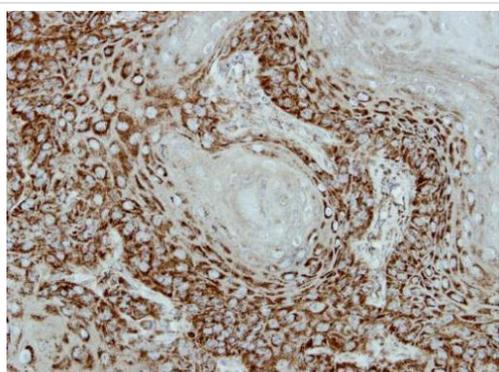
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AK2 antibody (ab228801)

Paraffin-embedded rat ovary tissue stained for AK2 using ab228801 at 1/500 dilution in immunohistochemical analysis.



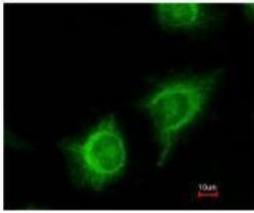
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AK2 antibody (ab228801)

Paraffin-embedded rat pancreas tissue stained for AK2 using ab228801 at 1/500 dilution in immunohistochemical analysis.



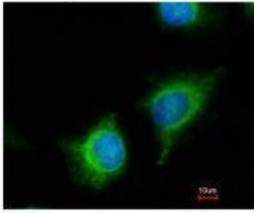
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-AK2 antibody (ab228801)

Paraffin-embedded Cal27 xenograft tissue stained for AK2 using ab228801 at 1/500 dilution in immunohistochemical analysis.

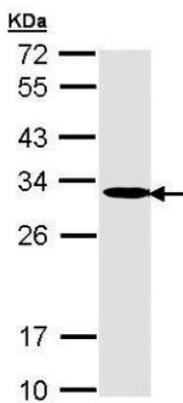


Paraformaldehyde-fixed HeLa (human epithelial cell line from cervix adenocarcinoma) cells stained for AK2 (green) using ab228801 at 1/200 dilution in ICC/IF.

Blue: Hoechst 33342 staining.



Immunocytochemistry/ Immunofluorescence - Anti-AK2 antibody (ab228801)



Anti-AK2 antibody (ab228801) at 1/1000 dilution + MOLT-4 (human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 30 µg

Predicted band size: 26 kDa

12% SDS-PAGE gel.

Western blot - Anti-AK2 antibody (ab228801)

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