

## Monoclonal anti-human AK3 antibody (clone SJB3-36)

Mouse IgG<sub>1</sub>, κ

Cat. No. IBAAK0604

**Immunogen:** Recombinant human AK3 (adenylate kinase isozyme 3) purified from *E. coli*

**NCBI Accession No.:** NP\_057366

**Isotype:** Mouse IgG<sub>1</sub> heavy chain and κ light chain

**Clone:** Anti-human AK3 mAb, clone SJB3-36, is derived from hybridization of mouse SP2/O myeloma cells with spleen cells from BALB/c mice immunized with a recombinant human AK3 protein.

**Description:** Adenylate kinase (AK; adenosine triphosphate-adenosine monophosphate [ATP-AMP] phosphotransferase, EC 2.7.4.3) is a ubiquitous monomeric enzyme involved energy metabolism of prokaryotic and eukaryotic cells. Three isozymes (AK1, AK2 and AK3) are characterized in vertebrates. AK1 is present in the cytosol of skeletal muscle, brain, and erythrocyte, while AK2 is localized in the intermembrane space of mitochondria of liver, kidney, spleen and heart. AK3, called GTP:AMP phosphotransferase, exists in the mitochondrial matrix of liver and heart. These isozymes contribute to homeostasis of the adenine nucleotide composition in the cell.

**Concentration:** 1 mg/ml

**Form:** Liquid. In Phosphate-Buffered Saline (pH 7.4) with 0.02% Sodium Azide, 10% Glycerol.

**Storage:** Can be stored at +4C. For long term storage, aliquot and store at -20C. Avoid repeated freezing and thawing cycles.

**Usage:** The antibody has been tested by ELISA, Western blot analysis, immunohistochemistry, ICC/IF and Flow cytometry to assure specificity and reactivity. Since application varies, however, each investigation should be titrated by the reagent to obtain optimal results.

**Application:** ELISA, WB, IHC, ICC/IF, Flow cytometry

**For research use only. This product is not intended or approved for human, diagnostics or veterinary use.**



Manufactured for:

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# Product information

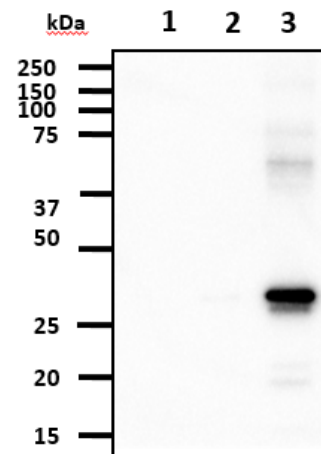
## Western blot analysis

The recombinant protein (50ng) were resolved by SDS-PAGE, transferred to PVDF membrane and probed with anti-human AK3 antibody (1:1,000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.

Lane 1. : Recombinant Human AK1

Lane 2. : Recombinant Human AK2

Lane 3. : Recombinant Human AK3



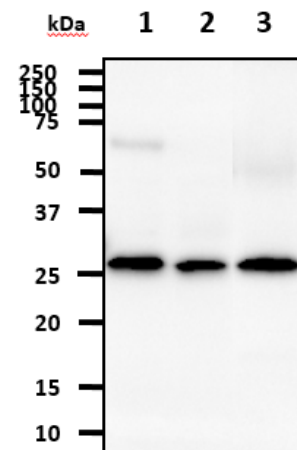
## Western blot analysis

The lysate (40ug) were resolved by SDS-PAGE, transferred to NC membrane and probed with anti-human AK3 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.

Lane 1. : Hep3B cell lysate

Lane 2. : 293T cell lysate

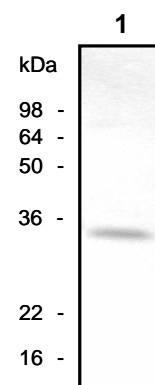
Lane 3. : Mouse kidney tissue lysate



## Western blot analysis

The lysate (40ug) were resolved by SDS-PAGE, transferred to NC membrane and probed with anti-human AK3 antibody (1:1000). Proteins were visualized using a goat anti-mouse secondary antibody conjugated to HRP and an ECL detection system.

Lane 1. : Mouse liver tissue lysate

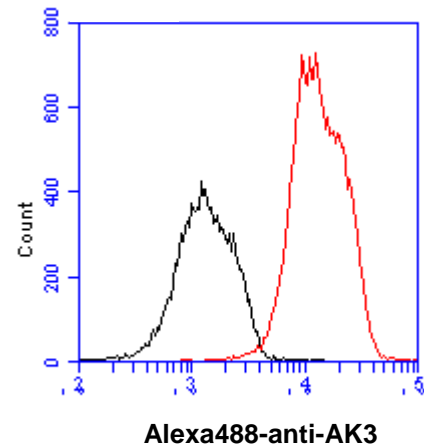


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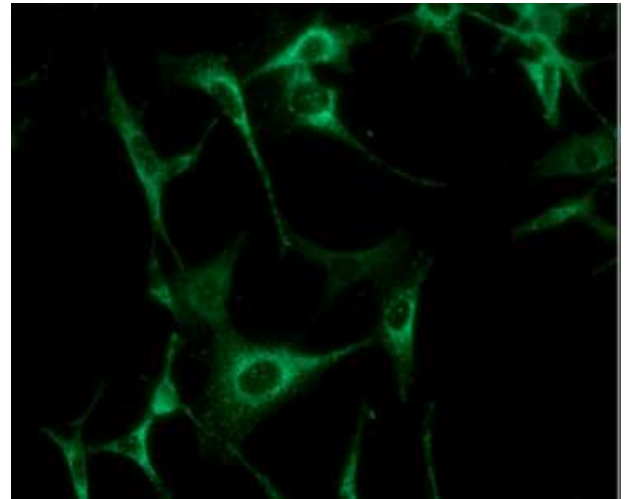
## Flow cytometry

Flow cytometry analysis of AK3 in jurkat cell line, staining at 2-5ug for  $1 \times 10^6$  cells (red line). The secondary antibody used goat anti-mouse IgG Alexa fluor 488 conjugate. Isotype control antibody was mouse IgG (black line).



## ICC/IF analysis

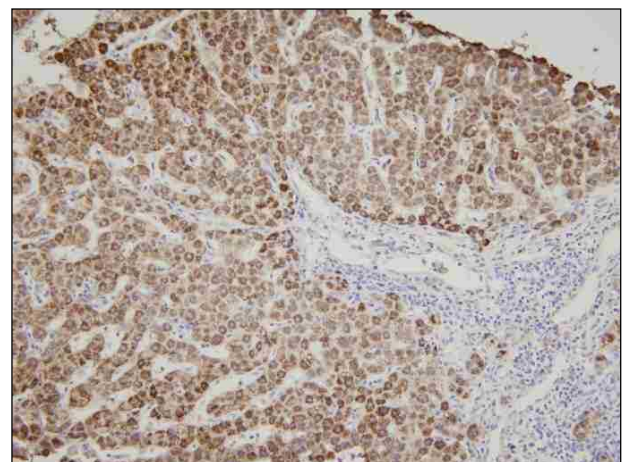
ICC/IF analysis of AK3 in U87MG cells line, stained with DAPI (Blue) for nucleus staining and monoclonal anti-human AK3 antibody (1:100) with goat anti-mouse IgG-Alexa fluor 488 conjugate (Green).



## Immunohistochemistry

Human liver tissue was incubated with anti-human AK3 (1:100) for 2 hours at room temperature. Slide was then washed in PBS, and was incubated in avidin biosystem anti-rabbit labeled polymer for 30 min at RT.

Enzyme detection was performed with DAB chromo-gen.



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- General references** Noda, L.H. *et al.* (1973) *The Enzymes*. Vol. 8, 279-305  
Khoo, J.C. *et al.* (1972) *Biochim. Biophys. Acta* 268, 98-101  
Tomasselli, A.G. *et al.* (1979) *Eur.J.Biochemolecules* 93, 257-262  
Lee, Y. *et al.* (1998) *J. Biochem.* 123, 47-54

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