

**AK1 Antibody (C-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP8160b****Specification**

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**AK1 Antibody (C-term) - Product Information**

Application	WB, IHC-P,E
Primary Accession	<a href="#">P00568</a>
Reactivity	Human, Hamster
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	21635
Antigen Region	165-194

**AK1 Antibody (C-term) - Additional Information****Gene ID** 203**Other Names**

Adenylate kinase isoenzyme 1 {ECO:0000255|HAMAP-Rule:MF\_03171}, AK 1  
{ECO:0000255|HAMAP-Rule:MF\_03171}, 2743 {ECO:0000255|HAMAP-Rule:MF\_03171}, 2746  
{ECO:0000255|HAMAP-Rule:MF\_03171}, ATP-AMP transphosphorylase 1  
{ECO:0000255|HAMAP-Rule:MF\_03171}, ATP:AMP phosphotransferase  
{ECO:0000255|HAMAP-Rule:MF\_03171}, Adenylate monophosphate kinase  
{ECO:0000255|HAMAP-Rule:MF\_03171}, Myokinase {ECO:0000255|HAMAP-Rule:MF\_03171}, AK1  
{ECO:0000255|HAMAP-Rule:MF\_03171}

**Target/Specificity**

This AK1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 165-194 amino acids from the C-terminal region of human AK1.

**Dilution**

WB~~1:1000  
IHC-P~~1:50~100

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

AK1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**AK1 Antibody (C-term) - Protein Information**

**Name** AK1 {ECO:0000255|HAMAP-Rule:MF\_03171, ECO:0000312|HGNC:HGNC:361}

**Function** Catalyzes the reversible transfer of the terminal phosphate group between ATP and AMP. Also displays broad nucleoside diphosphate kinase activity. Plays an important role in cellular energy homeostasis and in adenine nucleotide metabolism (By similarity) (PubMed:[21080915](#), PubMed:[23416111](#), PubMed:[2542324](#)). Also catalyzes at a very low rate the synthesis of thiamine triphosphate (ThTP) from thiamine diphosphate (ThDP) and ADP (By similarity).

**Cellular Location**

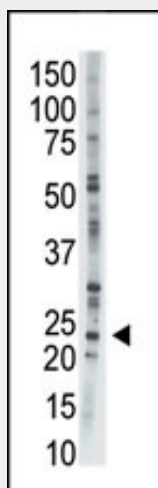
Cytoplasm {ECO:0000250|UniProtKB:P05081}.

### AK1 Antibody (C-term) - Protocols

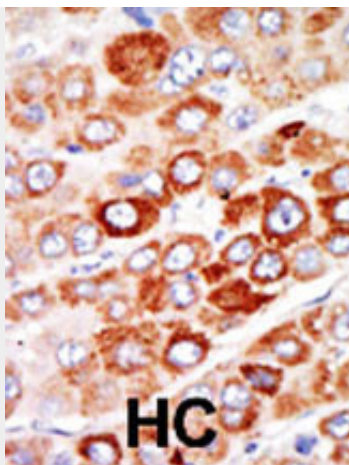
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### AK1 Antibody (C-term) - Images



The anti-AK1 Pab (Cat. #AP8160b) is used in Western blot to detect AK1 in CHO cell lysate.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

#### **AK1 Antibody (C-term) - Background**

Adenylate kinase is an enzyme involved in regulating the adenine nucleotide composition within a cell by catalyzing the reversible transfer of phosphate group among adinine nucleotides. Three isozymes of adenylate kinase have been identified in vertebrates, adenylate isozyme 1 (AK1), 2 (AK2) and 3 (AK3). AK1 is found in the cytosol of skeletal muscle, brain and erythrocytes, whereas AK2 and AK3 are found in the mitochondria of other tissues including liver and heart. AK1 was identified because of its association with a rare genetic disorder causing nonspherocytic hemolytic anemia where a mutation in the AK1 gene was found to reduce the catalytic activity of the enzyme.

#### **AK1 Antibody (C-term) - References**

- Corrons, J.L., et al., Blood 102(1):353-356 (2003).
- Toren, A., et al., Br. J. Haematol. 87(2):376-380 (1994).
- Zuffardi, O., et al., Hum. Genet. 82(1):17-19 (1989).
- Matsuura, S., et al., J. Biol. Chem. 264(17):10148-10155 (1989).
- Miwa, S., et al., Am. J. Hematol. 14(4):325-333 (1983).