10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

AK1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8160b

Specification

AK1 Antibody (C-term) - Product Information

Application	**WB, IHC-P,E**
Primary Accession	P00568
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

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Name AK1 {ECO:0000255|HAMAP-Rule:MF_03171}

Function Catalyzes the reversible transfer of the terminal phosphate group between ATP and AMP (PubMed:2542324). Exhibits nucleoside diphosphate kinase activity, catalyzing the production of ATP, CTP, GTP, UTP, dATP, dCTP, dGTP and dTTP from the corresponding diphosphate substrates with either ATP or GTP as phosphate donor (PubMed:23416111). Also catalyzes at a very low rate the synthesis of thiamine triphosphate (ThTP) from thiamine diphosphate (ThDP) and ADP (By similarity).

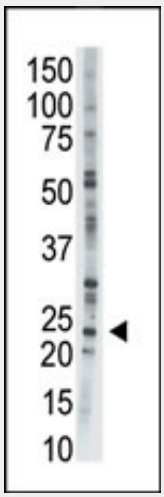
Cellular Location
Cytoplasm {ECO:0000250|UniProtKB:P05081}.

AK1 Antibody (C-term) - Protocols

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

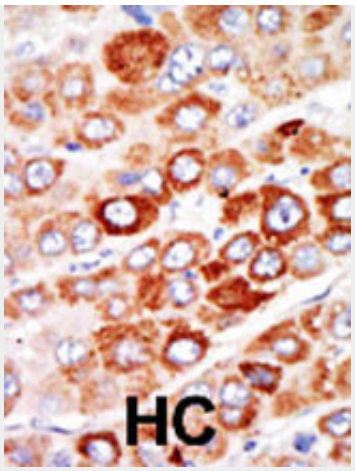
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

AK1 Antibody (C-term) - Images



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

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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).