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AK2 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8134b

Product Information

Application	WB, IHC-P, E
Primary Accession	P54819
Reactivity	Human, Rat, Mouse
Predicted	Bovine, Canine, Rabbit, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB3896
Calculated MW	26478
Antigen Region	187-217

Additional Information

Gene ID	204
Other Names	Adenylate kinase 2, mitochondrial {ECO:0000255|HAMAP-Rule:MF_03168}, AK 2 {ECO:0000255|HAMAP-Rule:MF_03168}, 2743 {ECO:0000255|HAMAP-Rule:MF_03168}, ATP-AMP transphosphorylase 2 {ECO:0000255|HAMAP-Rule:MF_03168}, ATP:AMP phosphotransferase {ECO:0000255|HAMAP-Rule:MF_03168}, Adenylate monophosphate kinase {ECO:0000255|HAMAP-Rule:MF_03168}, Adenylate kinase 2, mitochondrial, N-terminally processed {ECO:0000255|HAMAP-Rule:MF_03168}, AK2 {ECO:0000255|HAMAP-Rule:MF_03168}, ADK2
Target/Specificity	This AK2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 187-217 amino acids from the C-terminal region of human AK2.
Dilution	WB~~1:2000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
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	AK2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	AK2 {ECO:0000255|HAMAP-Rule:MF_03168}
Synonyms	ADK2
Function	Catalyzes the reversible transfer of the terminal phosphate group between ATP and AMP. Plays an important role in cellular energy homeostasis and in adenine nucleotide metabolism. Adenylate kinase activity is critical for regulation of the phosphate utilization and the AMP de novo biosynthesis pathways. Plays a key role in hematopoiesis.
Cellular Location	Mitochondrion intermembrane space {ECO:0000255|HAMAP-Rule:MF_03168}
Tissue Location	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)

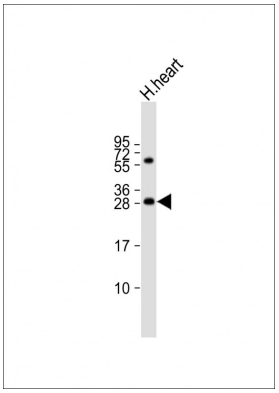
Background

Adenylate kinases are involved in regulating the adenine nucleotide composition within a cell by catalyzing the reversible transfer of phosphate groups among adenine nucleotides. Five isozymes of adenylate kinase have been identified in vertebrates. Expression of these isozymes is tissue-specific and developmentally regulated. Isozyme 2 is localized in the mitochondrial intermembrane space and may play a role in apoptosis.

References

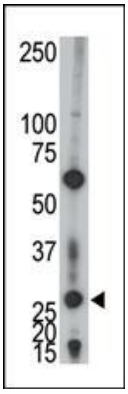
Noma, T., et al., Biochim. Biophys. Acta 1395(1):34-39 (1998).
Lee, Y., et al., J. Biochem. 123(1):47-54 (1998).
Lee, Y., et al., Biochem. Mol. Biol. Int. 39(4):833-842 (1996).
Bruns, G.A., et al., Biochem. Genet. 15 (5-6), 477-486 (1977).

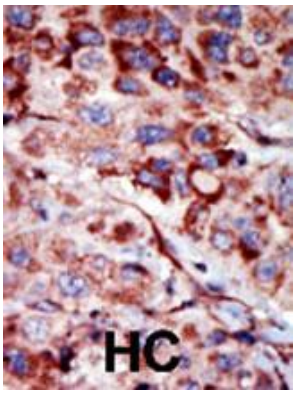
Images



Anti-AK2 Antibody (C-term) at 1:2000 dilution + human heart lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 26 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

The anti-AK2 Pab (Cat. #AP8134b) is used in Western blot to detect AK2 in Jurkat 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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.