10320 Camino Santa Fe, Suite G
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Tel: 858.875.1900 Fax: 858.875.1999

AK2 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP21602c

Specification

AK2 Antibody (Center) - Product Information

Application	**WB, IHC-P, FC,E**
Primary Accession	P54819
Other Accession	Q9WTP6, Q1L8L9
Reactivity	**Human, Mouse, Zebrafish**
Host	**Rabbit**
Clonality	**polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**26,478 Da Da**
Antigen Region	**147-183**

AK2 Antibody (Center) - 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}, ak2

Target/Specificity
This AK2 antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 147-183 amino acids from the central region of human AK2.

Dilution
WB~~1:2000
IHC-P~~1:25
FC~~1:25
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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 (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

AK2 Antibody (Center) - 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)

AK2 Antibody (Center) - 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

AK2 Antibody (Center) - Images

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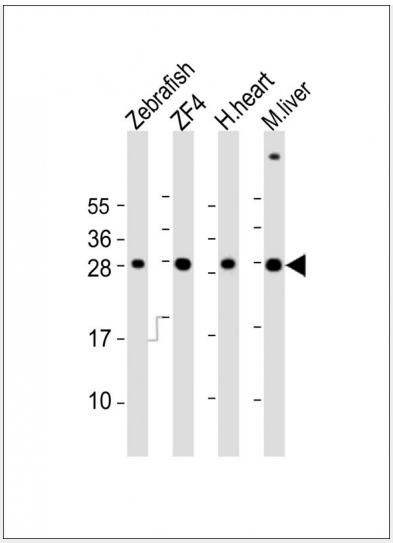
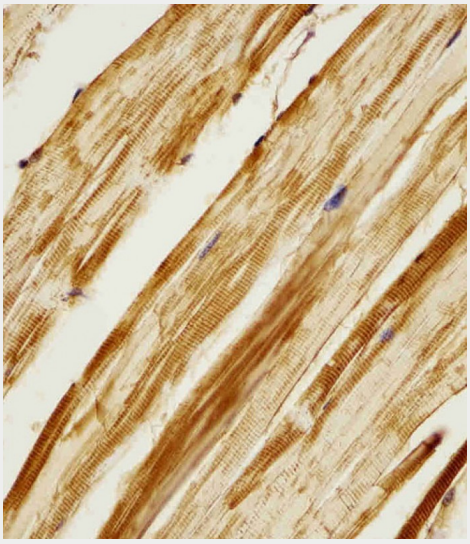


All lanes : Anti-AK2 Antibody (Center) at 1:2000 dilution Lane 1: Zebrafish lysates Lane 2: ZF4 whole cell lysates Lane 3: human heart lysates Lane 4: mouse liver lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 27 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



AP21602c staining AK2 in zebra fish body tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.

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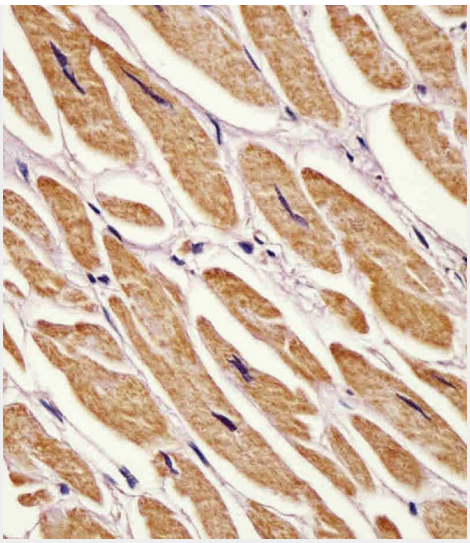
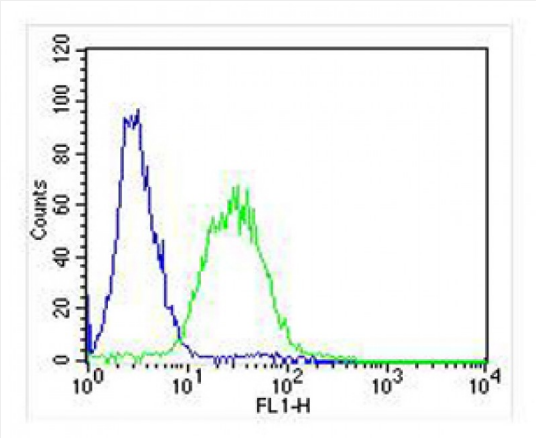


AP21602c staining AK2in human heart tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



Overlay histogram showing ZF4 cells stained with AP21602c (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP21602c, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OH191631) at 1/400 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

AK2 Antibody (Center) - Background

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.

AK2 Antibody (Center) - References

Howe K.,et al.Nature 496:498-503(2013).

Pannicke U.,et al.Nat. Genet. 41:101-105(2009).