

AK3 Antibody (N-term F210)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8132c

Specification

AK3 Antibody (N-term F210) - Product Information

Application	WB,E
Primary Accession	P27144
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit Ig
Calculated MW	25268
Antigen Region	23-53

AK3 Antibody (N-term F210) - Additional Information

Gene ID 205

Other Names

Adenylate kinase 4, mitochondrial
{ECO:0000255|HAMAP-Rule:MF_03170}, AK
4 {ECO:0000255|HAMAP-Rule:MF_03170},
27410
{ECO:0000255|HAMAP-Rule:MF_03170},
2746
{ECO:0000255|HAMAP-Rule:MF_03170},
Adenylate kinase 3-like
{ECO:0000255|HAMAP-Rule:MF_03170},
GTP:AMP phosphotransferase AK4
{ECO:0000255|HAMAP-Rule:MF_03170},
AK4
{ECO:0000255|HAMAP-Rule:MF_03170}

Target/Specificity

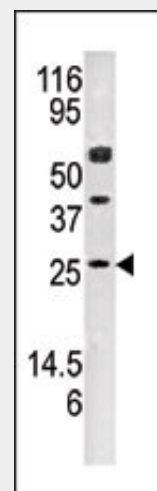
This AK3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 23-53 amino acids from the N-terminal region of human AK3.

Dilution

WB~~1:1000

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.



Western blot analysis of anti-AK3 Pab (Cat. #AP8132c) in mouse kidney tissue lysate (35ug/lane). AK3(arrow) was detected using the purified Pab.

AK3 Antibody (N-term F210) - Background

AK3 is a member of the adenylate kinase family of enzymes. This protein is localized to the mitochondrial matrix. Adenylate kinases regulate the adenine and guanine nucleotide compositions within a cell by catalyzing the reversible transfer of phosphate group among these nucleotides. Five isozymes of adenylate kinase have been identified in vertebrates. Expression of these isozymes is tissue-specific and developmentally regulated.

AK3 Antibody (N-term F210) - References

Biochem. J. 358 (PT 1), 225-232 (2001)
Eur. J. Biochem. 261(2):509-517 (1999).
Brain Res. Mol. Brain Res. 62(2):187-195 (1998).
Genomics 13(3):537-542 (1992).
Cytogenet. Cell Genet. 32 (1-4), 144-152 (1982).

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

AK3 Antibody (N-term F210) is for research use only and not for use in diagnostic or therapeutic procedures.

AK3 Antibody (N-term F210) - Protein Information**Name** AK4

{ECO:0000255|HAMAP-Rule:MF_03170}

Function

Involved in maintaining the homeostasis of cellular nucleotides by catalyzing the interconversion of nucleoside phosphates (PubMed:19073142, PubMed:19766732, PubMed:23416111, PubMed:24767988). Efficiently phosphorylates AMP and dAMP using ATP as phosphate donor, but phosphorylates only AMP when using GTP as phosphate donor (PubMed:19073142, PubMed:19766732, PubMed:23416111). Also displays broad nucleoside diphosphate kinase activity (PubMed:19073142, PubMed:19766732, PubMed:23416111). Plays a role in controlling cellular ATP levels by regulating phosphorylation and activation of

the energy sensor protein kinase AMPK (PubMed:24767988, PubMed:26980435). Plays a protective role in the cellular response to oxidative stress (PubMed:19130895, PubMed:23474458, PubMed:26980435).

Cellular Location

Mitochondrion matrix
{ECO:0000255|HAMAP- Rule:MF_03170,
ECO:0000269|PubMed:11485571,
ECO:0000269|PubMed:19766732,
ECO:0000269|PubMed:26980435}

Tissue Location

Highly expressed in kidney, moderately expressed in heart and liver and weakly expressed in brain

AK3 Antibody (N-term F210) - 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](#)