

Recombinant AK4/Adenylate Kinase 4/AK3L1 Monoclonal Antibody

catalog number: **AN300420P**

Note: Centrifuge before opening to ensure complete recovery of vial contents.

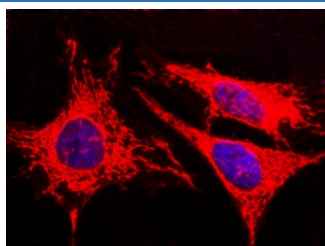
Description

Reactivity	Human
Immunogen	Recombinant Human AK4/AK3L1 protein
Host	Rabbit
Isotype	IgG
Clone	3G5
Purification	Protein A
Buffer	0.2 µm filtered solution in PBS

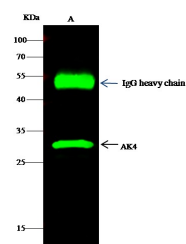
Applications Recommended Dilution

WB	1:500-1:2000
ICC/IF	1:20-1:100
IP	1-4 µL/mg of lysate

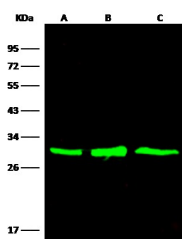
Data



Immunofluorescence analysis of Human AK4 in Hela cells. Cells were fixed with 4% PFA, permeabilized with 0.3% Triton X-100 in PBS, blocked with 10% serum, and incubated with rabbit anti-Human AK4 monoclonal antibody (1:60) at 37°C 1 hour. Then cells were stained with the Alexa Fluor® 594-conjugated Goat Anti-rabbit IgG secondary antibody (red) and counterstained with DAPI (blue). Positive staining was localized to cytoplasm.



Immunoprecipitation analysis using 2 µL anti-AK4 Monoclonal Antibody and 15 µl of 50 % Protein G agarose. Western blot was performed from the immunoprecipitate using AK4 Monoclonal Antibody at a dilution of 1:200. Lane A: 0.5 mg HepG2 Whole Cell Lysate
Observed-MW:26 kDa
Calculated-MW:26 kDa



Western Blot with AK4 Monoclonal Antibody at dilution of 1:500 dilution. Lane A: MCF7 Whole Cell Lysate, Lane B: HepG2 Whole Cell Lysate, Lane C: 293T Whole Cell Lysate, Lysates/proteins at 30 µg per lane.

Observed-MW:26 kDa
Calculated-MW:26 kDa

Preparation & Storage

For Research Use Only

Toll-free: 1-888-852-8623
Web: www.elabscience.com

Tel: 1-832-243-6086
Email: techsupport@elabscience.com

Fax: 1-832-243-6017

Rev. V1.0

Storage

This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. Preservative-Free. Avoid repeated freeze-thaw cycles.

Shipping

Ice bag

Background

Adenylate kinase isoenzyme 4, mitochondrial, also known as ATP-AMP transphosphorylase, Adenylate kinase 3-like, AK4 and AK3L1, is a member theadenylate kinase family. AK4/AK3L1 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. AK4/AK3L1 catalyzes the reversible transfer of the terminal phosphate group between ATP and AMP. It may also be active with GTP. Adenylate kinase 4 (AK4/AK3L1) is a unique member with no enzymatic activity in the adenylate kinase (AK) family although it shares high sequence homology with other AKs. It remains unclear what physiological function AK4 might play or why it is enzymatically inactive. AK4/AK3L1 retains the capability of binding nucleotides. It has a glutamine residue instead of a key arginine residue in the active site well conserved in other AKs. The enzymatically inactive AK4 is a stress responsive protein critical to cell survival and proliferation. AK4/AK3L1 is likely that the interaction with the mitochondrial inner membrane protein ANT is important for AK4 to exert the protective benefits to cells under stress. AK4/AK3L1 also acts on the specific mechanism of energy metabolism rather than control of the homeostasis of the ADP pool ubiquitously.

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