Rabbit anti-Human AK3L1 Monoclonal Antibody | anti-AK4 antibody

Recombinant Anti-AK3L1 Antibody, Rabbit Monoclonal

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA255566	**Rabbit**	**Human**	**Immunoprecipitation, Immunofluorescence, Immunocytochemistry, Western Blot**

PRODUCT SYNONYMS

AK3L1; Monoclonal Antibody; Recombinant Anti-AK3L1 Antibody; Rabbit Monoclonal; AK4/Adenylate Kinase 4/AK3L1 Antibody; Rabbit MAb; adenylate kinase 4; Anti-AK3 Antibody; Anti-AK3L1 Antibody; Anti-AK3L2 Antibody; Anti-AK4 Antibody; anti-AK4 antibody

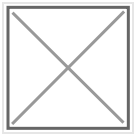
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Clone Number	010
Specificity	Human AK4/AK3L1
Purity/Purification	Protein A
Form/Format	Liquid; 0.2um filtered solution in PBS
Applicable Applications for anti-AK4 antibody	IP (Immunoprecipitation), IF (Immunofluorescence), ICC (Immunocytochemistry), WB (Western Blot)
Antibody Type	Recombinant Antibody
Immunogen	Recombinant Human AK4/AK3L1 protein
Conjugation	Unconjugated
Preparation	This antibody was obtained from a rabbit immunized with purified, recombinant Human AK4/AK3L1 (rh AK4/AK3L1).
Preparation and Storage	This antibody can be stored at 2-8 degree C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 degree C to -80 degree C. Preservative-Free. Avoid repeated freeze-thaw cycles.

IMAGES

WB (Western Blot)
Anti-AK4 rabbit monoclonal antibody at 1:500 dilutionLane A: MCF7 Whole Cell LysateLane B: HepG2 Whole Cell LysateLane C: 293T Whole Cell LysateLysates/proteins at 30 ug per lane.SecondaryGoat Anti-Rabbit IgG H&L (Dylight800) at 1/10000 dilution.Developed using the Odyssey technique.Performed under reducing conditions.Predicted band size:26 kDaObserved band size:26 kDa

IP (Immunoprecipitation)
AK4 was immunoprecipitated using:Lane A:0.5 mg HepG2 Whole Cell Lysate2 uL anti-AK4 rabbit monoclonal antibody and 15 ul of 50 % Protein G agarose.Primary antibody:Anti-AK4 rabbit monoclonal antibody,at 1:200 dilutionSecondary antibody:Dylight 800-labeled antibody to rabbit IgG (H+L), at 1:5000 dilutionDeveloped using the odssey technique.Performed under reducing conditions.Predicted band size: 26 kDaObserved band size: 26 kDa



IF (Immunofluorescence)
Immunofluorescence staining of Human AK4 in Hela cells. Cells were fixed with 4% PFA, permeabilzed 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 degree 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.

ADDITIONAL INFORMATION

Related Product Information for anti-AK4 antibody	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.
References	Xu G., et al., (1992), Characterization of human adenylate kinase 3 (AK3) cDNA and mapping of the AK3 pseudogene to an intron of the NF1 gene. Genomics 13:537-542.Gregory S.G., et al., (2006), The DNA sequence and biological annotation of human chromosome 1.Nature 441:315-321.Ota T., et al., (2004), Complete sequencing and characterization of 21, 243 full-length human cDNAs.Nat. Genet. 36:40-45.

NCBI AND UNIPROT INFORMATION

NCBI GI #	125157
NCBI GeneID	205
UniProt Accession #	P27144; Q6IBH4; Q6NXQ5; Q8IUU9; B2R927; D3DQ62
Molecular Weight	223
NCBI Official Full Name	Adenylate kinase 4, mitochondrial
NCBI Official Synonym Full Names	adenylate kinase 4
NCBI Official Symbol	AK4
NCBI Official Synonym Symbols	AK3; AK 4; AK3L1; AK3L2
NCBI Protein Information	adenylate kinase 4, mitochondrial; AK4; AK 4; adenylate kinase 3-like 1; ATP-AMP transphosphorylase; mitochondrial adenylate kinase-3; nucleoside-triphosphate-adenylate kinase; adenylate kinase isoenzyme 4, mitochondrial; GTP:AMP phosphotransferase AK4, m
UniProt Protein Name	Adenylate kinase 4, mitochondrial
UniProt Gene Name	**AK4**
UniProt Entry Name	KAD4_HUMAN

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