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

Anti-AK3L1 Antibody, Rabbit Polyclonal

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA256309	**Rabbit**	**Human**	**Immunoprecipitation, Immunofluorescence, Immunocytochemistry, Immunohistochemistry, Western Blot**

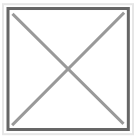
PRODUCT SYNONYMS

AK3L1; Polyclonal Antibody; Anti-AK3L1 Antibody; Rabbit Polyclonal; AK3L1/AK4 Antibody; Rabbit PAb; Antigen Affinity Purified; adenylate kinase 4; Anti-AK3 Antibody; Anti-AK3L2 Antibody; Anti-AK4 Antibody; anti-AK4 antibody

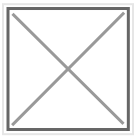
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Human AK3L1/AK4
Purity/Purification	Protein A & Antigen Affinity
Form/Format	Liquid; PBS, pH7.0 with 0.03% Proclin300
Applicable Applications for anti-AK4 antibody	IP (Immunoprecipitation), IF (Immunofluorescence), ICC (Immunocytochemistry), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	E Coli-derived Human AK3L1/AK4 fragment
Conjugation	Unconjugated
Preparation	Produced in rabbits immunized with E Coli-derived Human AK3L1/AK4 fragment, and purified by antigen affinity chromatography.
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. Avoid repeated freeze-thaw cycles.

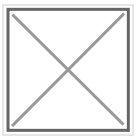
IMAGES



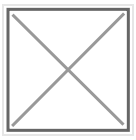
IP (Immunoprecipitation)
AK4 was immunoprecipitated using:Lane A:0.5 mg HepG2 Whole Cell Lysate4 uL anti-AK4 rabbit polyclonal antibody and 60 ug of Immunomagnetic beads Protein A/G.Primary antibody:Anti-AK4 rabbit polyclonal antibody,at 1:100 dilutionSecondary antibody:Goat Anti-Rabbit IgG (H+L)/HRP at 1/10000 dilutionDeveloped using the ECL technique.Performed under reducing conditions.Predicted band size: 25 kDaObserved band size :28 kDa



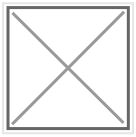
IF (Immunofluorescence)
Immunofluorescence staining of AK4 in Hela cells. Cells were fixed with 4% PFA, permeabilzed with 0.1% Triton X-100 in PBS,blocked with 10% serum, and incubated with rabbit anti-Human AK4 polyclonal antibody (dilution ratio 1:200) at 4 degree C overnight. Then cells were stained with the Alexa Fluor488-conjugated Goat Anti-rabbit IgG secondary antibody (green) and counterstained with DAPI (blue).Positive staining was localized to Cytoplasm.



IHC (Immunohistochemisry)
Immunochemical staining of human AK4 in human gallbladder with rabbit polyclonal antibody at 1:100 dilution, formalin-fixed paraffin embedded sections.



IHC (Immunohiostchemistry)
Immunochemical staining of human AK4 in human kidney with rabbit polyclonal antibody at 1:100 dilution, formalin-fixed paraffin embedded sections.



WB (Western Blot)
Anti-AK4 rabbit polyclonal antibody at 1:500 dilutionLane A: MCF-7 Whole Cell LysateLane B: HepG2 Whole Cell LysateLane C: Raji Whole Cell LysateLane D: A431 Whole Cell LysateLysates/proteins at 30 ug per lane.SecondaryGoat Anti-Rabbit IgG (H+L)/HRP at 1/10000 dilution.Developed using the ECL technique.Performed under reducing conditions.Predicted band size:25 kDaObserved band size:27 kDa

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.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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