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ADK Antibody (N-term)

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8619b

Product Information

Application	WB, IHC-P, E
Primary Accession	P55263
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Rabbit, Chicken
Host	Mouse
Clonality	monoclonal
Isotype	IgG1,k
Clone Names	1103CT3.4.3
Calculated MW	40545

Additional Information

Gene ID	132
Other Names	Adenosine kinase, AK, 2.7.1.20, Adenosine 5'-phosphotransferase, ADK
Target/Specificity	This ADK antibody is generated from a mouse immunized with a recombinant protein between 1-345 amino acids from human ADK.
Dilution	WB~~1:4000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
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	ADK Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ADK {ECO:0000303|PubMed:19635462, ECO:0000312|HGNC:HGNC:257}
Function	Adenosine kinase that mediates the phosphorylation of the purine nucleoside adenosine at the 5' position in an ATP-dependent manner: catalyzes phosphorylation of both unmodified and modified adenosines (PubMed:21963049, PubMed:40840445, PubMed:6246102, PubMed:8577746, PubMed:9070863). Plays a key role in the detoxification of modified adenosines containing N(6)-methylated adenine (m6A) post- transcriptional

modification (PubMed:40840445). Modified nucleosides are derived from the degradation of RNAs (mRNAs, rRNAs and tRNAs) and possess intrinsic cytotoxicity and must be cleared to prevent metabolic dysfunction (PubMed:40840445). Catalyzes the phosphorylation of the free cytosolic methylated adenosine nucleotides N(6)-methyladenosine (m6A), N(6),N(6)-dimethyladenosine (m6,6A) and N(6)- isopentenyladenosine (i6A) into adenosine monophosphate (AMP) intermediates that are further detoxified by MAPDA/ADAL (PubMed:40840445).

Cellular Location Cytoplasm, cytosol. [Isoform 2]: Cytoplasm

Tissue Location Widely expressed. Highest level in placenta, liver, muscle and kidney.

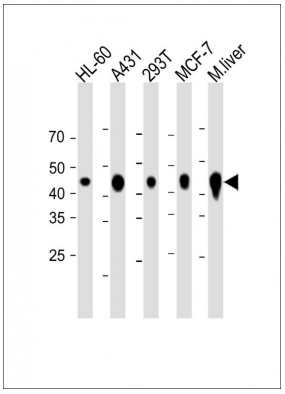
Background

ATP dependent phosphorylation of adenosine and other related nucleoside analogs to monophosphate derivatives. Serves as a potential regulator of concentrations of extracellular adenosine and intracellular adenine nucleotides.

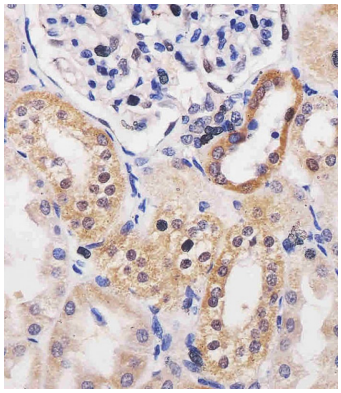
References

Spychala J.,et al.Proc. Natl. Acad. Sci. U.S.A. 93:1232-1237(1996).
Singh B.,et al.Eur. J. Biochem. 241:564-571(1996).
McNally T.,et al.Biochem. Biophys. Res. Commun. 231:645-650(1997).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Deloukas P.,et al.Nature 429:375-381(2004).

Images



All lanes: Anti-ADK Antibody (N-term) at 1:2000 dilution Lane 1: HL-60 whole cell lysate Lane 2: A431 whole cell lysate Lane 3: 293T whole cell lysate Lane 4: MCF-7 whole cell lysate Lane 5: Mouse liver lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Mouse IgG, (H+L), Peroxidase conjugated (ASP1613) at 1/8000 dilution. Observed band size: 45 KDa Blocking/Dilution buffer: 5% NFDM/TBST.



AM8619b staining ADK in human kidney 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.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.