

ADK Antibody (N-term)

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8619b

Product Information

Application	WB, IHC-P, E
Primary Accession	P55263
Reactivity	Human
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.

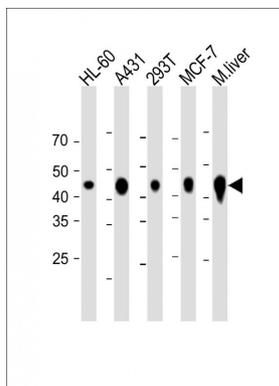
Background

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 adenosine nucleotides.

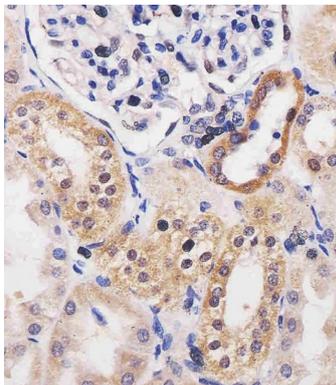
References

- 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.