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AK3L1 Rabbit mAb

Catalog # AP76383

Product Information

Application	WB, IHC-P
Primary Accession	P27144
Reactivity	Human
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	25268

Additional Information

Gene ID	205
Other Names	AK4
Dilution	WB~~1:1000-1:5000 IHC-P~~N/A
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

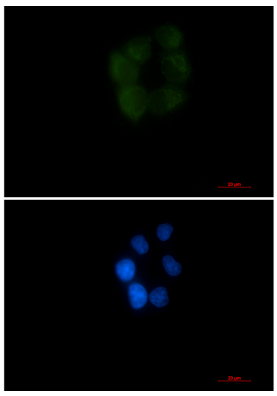
Name	AK4 (HGNC:363)
Function	Broad-specificity mitochondrial nucleoside phosphate kinase involved in cellular nucleotide homeostasis by catalyzing nucleoside- phosphate interconversions (PubMed:19073142, PubMed:19766732, PubMed:23416111, PubMed:24767988). Similar to other adenylate kinases, preferentially catalyzes the phosphorylation of the nucleoside monophosphate AMP with ATP as phosphate donor to produce ADP (PubMed:19766732). Phosphorylates only AMP when using GTP as phosphate donor (PubMed:19766732). In vitro, can also catalyze the phosphorylation of CMP, dAMP and dCMP and use GTP as an alternate phosphate donor (PubMed:19766732, PubMed:23416111). Moreover, exhibits a diphosphate kinase activity, producing ATP, CTP, GTP, UTP, TTP, dATP, dCTP and dGTP from the corresponding diphosphate substrates with either ATP or GTP as phosphate donors (PubMed:23416111). Plays a role in controlling cellular ATP levels by regulating phosphorylation and activation of the energy sensor protein kinase AMPK (PubMed:24767988, PubMed:26980435). Plays a protective role in the cellular response to

	oxidative stress (PubMed:19130895, PubMed:23474458, PubMed:26980435).
Cellular Location	Mitochondrion matrix {ECO:0000255|HAMAP- Rule:MF_03170, ECO:0000269|PubMed:11485571, ECO:0000269|PubMed:19766732, ECO:0000269|PubMed:26980435}
Tissue Location	Highly expressed in kidney, moderately expressed in heart and liver and weakly expressed in brain

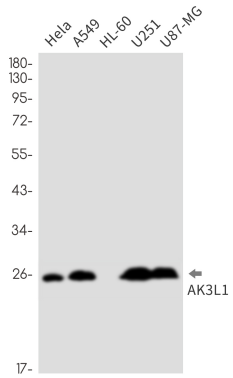
Background

Involved in maintaining the homeostasis of cellular nucleotides by catalyzing the interconversion of nucleoside phosphates.

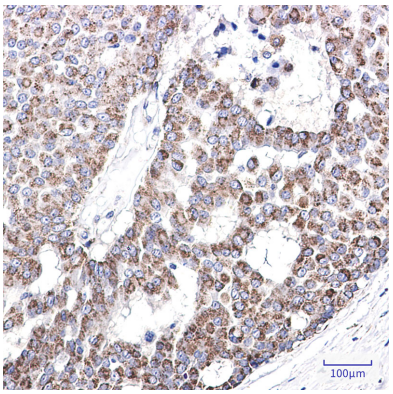
Images



Immunocytochemistry analysis of AK3L1 (green) in Hela using AK3L1 antibody,and DAPI(blue).



Western blot analysis of AK3L1 in Hela, A549, HL-60, U251, U87-MG lysates using AK3L1 antibody.



Immunohistochemistry analysis of paraffin-embedded Human breast cancer tissue using AK3L1 antibody. High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.

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