

Product datasheet for **CF500322**

Adenylate Kinase 1 (AK1) Mouse Monoclonal Antibody [Clone ID: OT18A1]

Product data:

Product Type:	Primary Antibodies
Clone Name:	OT18A1
Applications:	FC, IF, WB
Recommended Dilution:	WB 1:2500~5000, IF 1:100, FLOW 1:100
Reactivity:	Human, Monkey, Mouse, Rat
Host:	Mouse
Isotype:	IgG1
Clonality:	Monoclonal
Immunogen:	Full length human recombinant protein of human AK1 (NP_000467) produced in HEK293T cell.
Formulation:	Lyophilized powder (original buffer 1X PBS, pH 7.3, 8% trehalose)
Reconstitution Method:	For reconstitution, we recommend adding 100uL distilled water to a final antibody concentration of about 1 mg/mL. To use this carrier-free antibody for conjugation experiment, we strongly recommend performing another round of desalting process. (OriGene recommends Zeba Spin Desalting Columns, 7KMWCO from Thermo Scientific)
Purification:	Purified from mouse ascites fluids or tissue culture supernatant by affinity chromatography (protein A/G)
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Predicted Protein Size:	21.6 kDa
Gene Name:	adenylate kinase 1
Database Link:	NP_000467 Entrez Gene 11636 Mouse Entrez Gene 24183 Rat Entrez Gene 706338 Monkey Entrez Gene 203 Human P00568



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Background:

Adenylate kinase is an enzyme involved in regulating the adenine nucleotide composition within a cell by catalyzing the reversible transfer of phosphate group among adinine nucleotides. Three isozymes of adenylate kinase have been identified in vertebrates, adenylate isozyme 1 (AK1), 2 (AK2) and 3 (AK3). AK1 is found in the cytosol of skeletal muscle, brain and erythrocytes, whereas AK2 and AK3 are found in the mitochondria of other tissues including liver and heart. AK1 was identified because of its association with a rare genetic disorder causing nonspherocytic hemolytic anemia where a mutation in the AK1 gene was found to reduce the catalytic activity of the enzyme.

Synonyms:

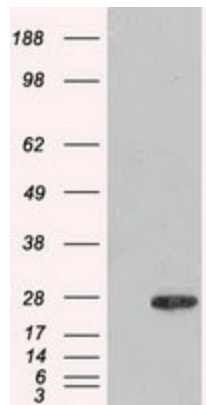
HTL-S-58j

Protein Families:

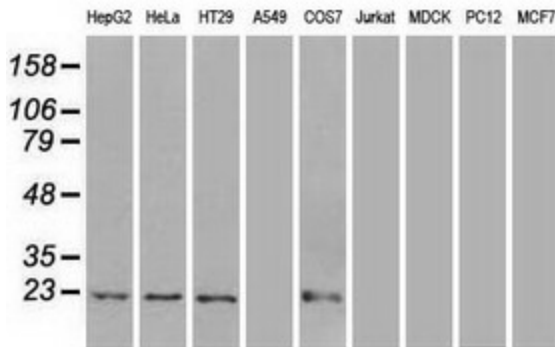
Druggable Genome

Protein Pathways:

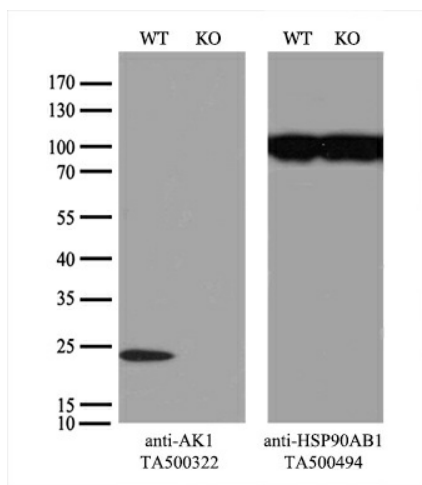
Metabolic pathways, Purine metabolism

Product images:


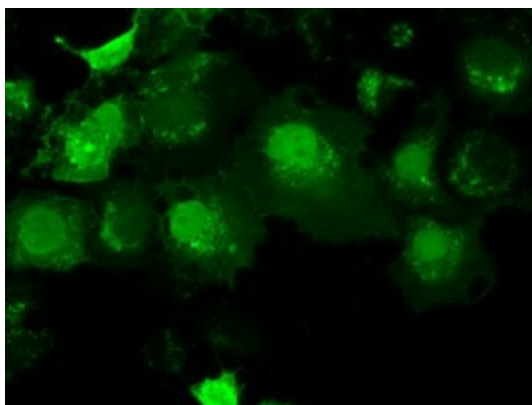
HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY AK1 ([RC215130], Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-AK1. Positive lysates [LY400171] (100ug) and [LC400171] (20ug) can be purchased separately from OriGene.



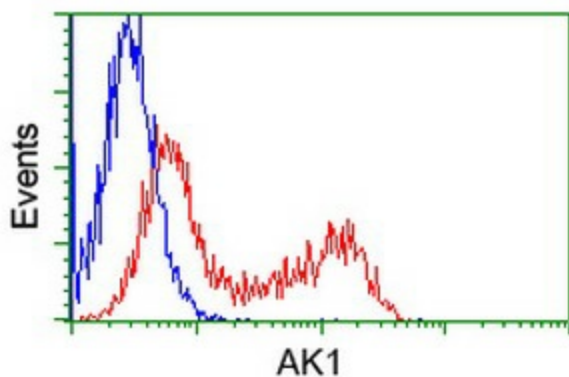
Western blot analysis of extracts (35ug) from 9 different cell lines by using anti-AK1 monoclonal antibody.



Equivalent amounts of cell lysates (10 ug per lane) of wild-type HeLa cells (WT, Cat# LC810HELA) and AK1-Knockout HeLa cells (KO, Cat# [LC810761]) were separated by SDS-PAGE and immunoblotted with anti-AK1 monoclonal antibody [TA500322] (1:500). Then the blotted membrane was stripped and reprobed with anti-HSP90 antibody as a loading control.



Anti-AK1 mouse monoclonal antibody ([TA500322]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY AK1 ([RC215130]).



HEK293T cells transfected with either [RC215130] overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-AK1 antibody ([TA500322]), and then analyzed by flow cytometry.