10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

AK1 Antibody (monoclonal) (M01)

Mouse monoclonal antibody raised against a full length recombinant AK1.
Catalog # AT1079a

Product Information

Application	WB, IF, E
Primary Accession	P00568
Other Accession	BC001116
Reactivity	Human
Host	mouse
Clonality	monoclonal
Isotype	IgG1 Kappa
Clone Names	3G8-1B11
Calculated MW	21635

Additional Information

Gene ID	203
Other Names	Adenylate kinase isoenzyme 1 {ECO:0000255|HAMAP-Rule:MF_03171}, AK 1 {ECO:0000255|HAMAP-Rule:MF_03171}, 2743 {ECO:0000255|HAMAP-Rule:MF_03171}, 2746 {ECO:0000255|HAMAP-Rule:MF_03171}, ATP-AMP transphosphorylase 1 {ECO:0000255|HAMAP-Rule:MF_03171}, ATP:AMP phosphotransferase {ECO:0000255|HAMAP-Rule:MF_03171}, Adenylate monophosphate kinase {ECO:0000255|HAMAP-Rule:MF_03171}, Myokinase {ECO:0000255|HAMAP-Rule:MF_03171}, AK1 {ECO:0000255|HAMAP-Rule:MF_03171}
Target/Specificity	AK1 (AAH01116, 1 a.a. ~ 194 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Dilution	WB~~1:500~1000 IF~~1:50~200 E~~N/A
Format	Clear, colorless solution in phosphate buffered saline, pH 7.2 .
Storage	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.
Precautions	AK1 Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

Background

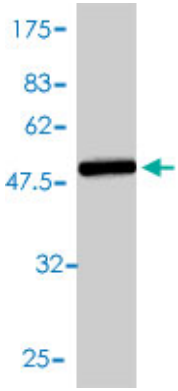
Adenylate kinase is an enzyme involved in regulating the adenine nucleotide composition within a cell by catalyzing the reversible transfer of phosphate group among adinine nucleotides. Three isozymes of adenylate kinase have been identified in vertebrates, adenylate isozyme 1 (AK1), 2 (AK2) and 3 (AK3). 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.

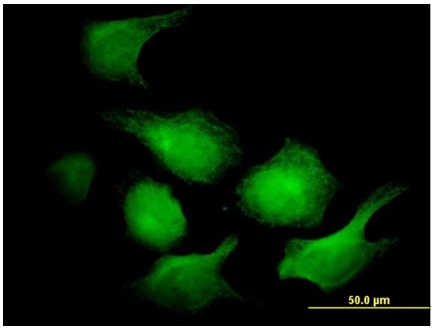
References

Prefrontal cortex shotgun proteome analysis reveals altered calcium homeostasis and immune system imbalance in schizophrenia. Martins-de-Souza D, et al. Eur Arch Psychiatry Clin Neurosci, 2009 Apr. PMID 19165527.Smoking and human reproduction: the effect of adenylate kinase genetic polymorphism. Gloria-Bottini F, et al. Am J Perinatol, 2009 Feb. PMID 18850517.Acyclic phosphonate nucleotides and human adenylate kinases: impact of a borano group on alpha-P position. Topalis D, et al. Nucleosides Nucleotides Nucleic Acids, 2008 Apr. PMID 18404568.Toward a confocal subcellular atlas of the human proteome. Barbe L, et al. Mol Cell Proteomics, 2008 Mar. PMID 18029348.Large-scale mapping of human protein-protein interactions by mass spectrometry. Ewing RM, et al. Mol Syst Biol, 2007. PMID 17353931.

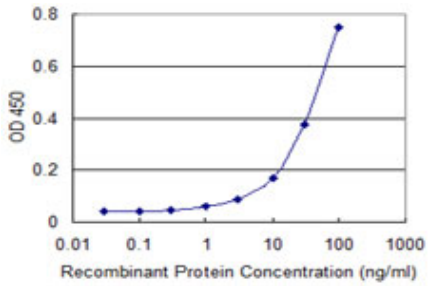
Images



Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (47.08 KDa) .



Immunofluorescence of monoclonal antibody to AK1 on HeLa cell. [antibody concentration 10 ug/ml]



Detection limit for recombinant GST tagged AK1 is approximately 10ng/ml as a capture antibody.

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