10320 Camino Santa Fe, Suite G
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# AK1 Antibody (monoclonal) (M06)

**Mouse monoclonal antibody raised against a full length recombinant AK1.**
**Catalog # AT1080a**

## Specification

### AK1 Antibody (monoclonal) (M06) - Product Information

| | |
|---|---|
| Application | **WB, IF, IP** |
| Primary Accession | P00568 |
| Other Accession | BC001116 |
| Reactivity | **Human** |
| Host | **mouse** |
| Clonality | **Monoclonal** |
| Isotype | **IgG1 Kappa** |
| Calculated MW | **21635** |

### AK1 Antibody (monoclonal) (M06) - 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
IP~~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) (M06) is for research use only and not for use in diagnostic or therapeutic procedures.

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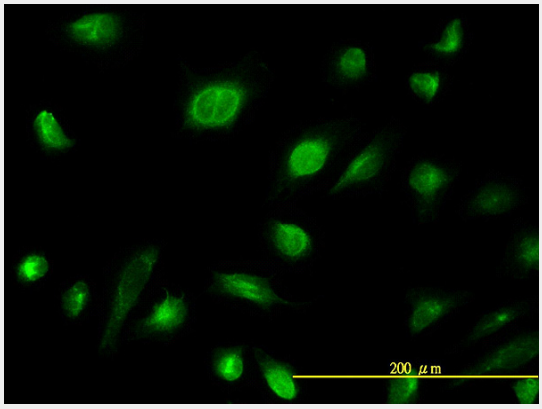
## AK1 Antibody (monoclonal) (M06) - Protocols

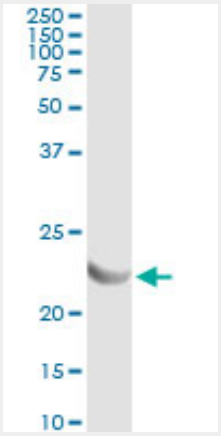
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

## AK1 Antibody (monoclonal) (M06) - Images




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




Immunoprecipitation of AK1 transfected lysate using anti-AK1 monoclonal antibody and Protein A Magnetic Bead (U0007), and immunoblotted with AK1 MaxPab rabbit polyclonal antibody.

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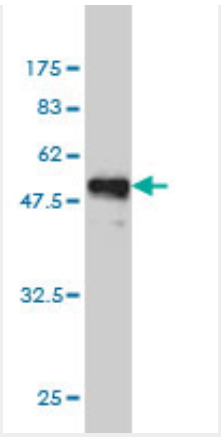
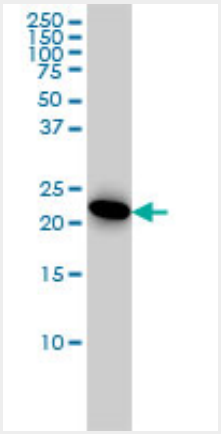
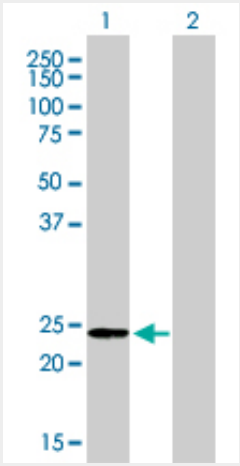



Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (47.08 KDa) .




AK1 monoclonal antibody (M06), clone 3A6-1F5 Western Blot analysis of AK1 expression in HeLa ( (Cat # AT1080a )




Western Blot analysis of AK1 expression in transfected 293T cell line by AK1 monoclonal antibody (M06), clone 3A6-1F5.

Lane 1: AK1 transfected lysate(21.6 KDa).
Lane 2: Non-transfected lysate.

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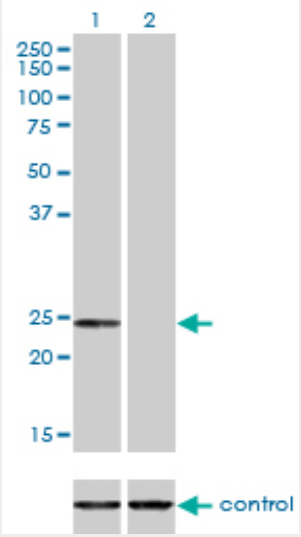


Detection limit for recombinant GST tagged AK1 is approximately 0.3ng/ml as a capture antibody.

**AK1 Antibody (monoclonal) (M06) - 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.

**AK1 Antibody (monoclonal) (M06) - 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.