

**AK1 Antibody (N-term) Blocking Peptide**Synthetic peptide  
Catalog # BP8160a**Specification**

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**AK1 Antibody (N-term) Blocking Peptide - Product Information**Primary Accession [P00568](#)**AK1 Antibody (N-term) Blocking Peptide - 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**

The synthetic peptide sequence used to generate the antibody [AP8160a](/product/products/AP8160a) was selected from the N-term region of human AK1 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**AK1 Antibody (N-term) Blocking Peptide - Protein Information****Name** AK1 {ECO:0000255|HAMAP-Rule:MF\_03171, ECO:0000312|HGNC:HGNC:361}**Function**

Catalyzes the reversible transfer of the terminal phosphate group between ATP and AMP. Also displays broad nucleoside diphosphate kinase activity. Plays an important role in cellular energy homeostasis and in adenine nucleotide metabolism (By similarity) (PubMed: [21080915](http://www.uniprot.org/citations/21080915), PubMed: [23416111](http://www.uniprot.org/citations/23416111), PubMed: [2542324](http://www.uniprot.org/citations/2542324)). Also catalyzes

at a very low rate the synthesis of thiamine triphosphate (ThTP) from thiamine diphosphate (ThDP) and ADP (By similarity).

**Cellular Location**

Cytoplasm {ECO:0000250|UniProtKB:P05081}.

**AK1 Antibody (N-term) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

**AK1 Antibody (N-term) Blocking Peptide - Images****AK1 Antibody (N-term) Blocking Peptide - 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 (N-term) Blocking Peptide - References**

Corrons, J.L., et al., Blood 102(1):353-356 (2003).Toren, A., et al., Br. J. Haematol. 87(2):376-380 (1994).Zuffardi, O., et al., Hum. Genet. 82(1):17-19 (1989).Matsuura, S., et al., J. Biol. Chem. 264(17):10148-10155 (1989).Miwa, S., et al., Am. J. Hematol. 14(4):325-333 (1983).