

**AK2 Antibody (N-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP8134a**

**Specification**

**AK2 Antibody (N-term) Blocking Peptide - Product Information**

Primary Accession [P54819](#)

**AK2 Antibody (N-term) Blocking Peptide - Additional Information**

**Gene ID** 204

**Other Names**

Adenylate kinase 2, mitochondrial {ECO:0000255|HAMAP-Rule:MF\_03168}, AK 2 {ECO:0000255|HAMAP-Rule:MF\_03168}, 2743 {ECO:0000255|HAMAP-Rule:MF\_03168}, ATP-AMP transphosphorylase 2 {ECO:0000255|HAMAP-Rule:MF\_03168}, ATP:AMP phosphotransferase {ECO:0000255|HAMAP-Rule:MF\_03168}, Adenylate monophosphate kinase {ECO:0000255|HAMAP-Rule:MF\_03168}, Adenylate kinase 2, mitochondrial, N-terminally processed {ECO:0000255|HAMAP-Rule:MF\_03168}, AK2 {ECO:0000255|HAMAP-Rule:MF\_03168}, ADK2

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody <a href=/product/products/AP8134a>AP8134a</a> was selected from the N-term region of human AK2 . 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.

**AK2 Antibody (N-term) Blocking Peptide - Protein Information**

**Name** AK2 {ECO:0000255|HAMAP-Rule:MF\_03168}

**Synonyms** ADK2

**Function**

Catalyzes the reversible transfer of the terminal phosphate group between ATP and AMP. Plays an important role in cellular energy homeostasis and in adenine nucleotide metabolism. Adenylate kinase activity is critical for regulation of the phosphate utilization and the AMP de novo biosynthesis pathways. Plays a key role in hematopoiesis.

**Cellular Location**

Mitochondrion intermembrane space {ECO:0000255|HAMAP-Rule:MF\_03168}

**Tissue Location**

Present in most tissues. Present at high level in heart, liver and kidney, and at low level in brain, skeletal muscle and skin. Present in thrombocytes but not in erythrocytes, which lack mitochondria. Present in all nucleated cell populations from blood, while AK1 is mostly absent. In spleen and lymph nodes, mononuclear cells lack AK1, whereas AK2 is readily detectable. These results indicate that leukocytes may be susceptible to defects caused by the lack of AK2, as they do not express AK1 in sufficient amounts to compensate for the AK2 functional deficits (at protein level)

**AK2 Antibody (N-term) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

**AK2 Antibody (N-term) Blocking Peptide - Images****AK2 Antibody (N-term) Blocking Peptide - Background**

Adenylate kinases are involved in regulating the adenine nucleotide composition within a cell by catalyzing the reversible transfer of phosphate groups among adenine nucleotides. Five isozymes of adenylate kinase have been identified in vertebrates. Expression of these isozymes is tissue-specific and developmentally regulated. Isozyme 2 is localized in the mitochondrial intermembrane space and may play a role in apoptosis.

**AK2 Antibody (N-term) Blocking Peptide - References**

Noma, T., et al., *Biochim. Biophys. Acta* 1395(1):34-39 (1998).Lee, Y., et al., *J. Biochem.* 123(1):47-54 (1998).Lee, Y., et al., *Biochem. Mol. Biol. Int.* 39(4):833-842 (1996).Bruns, G.A., et al., *Biochem. Genet.* 15 (5-6), 477-486 (1977).