

AK3 Antibody (N-term F210) Blocking Peptide
Synthetic peptide
Catalog # BP8132c**Specification**

AK3 Antibody (N-term F210) Blocking Peptide - Product InformationPrimary Accession [P27144](#)**AK3 Antibody (N-term F210) Blocking Peptide - Additional Information****Gene ID** 205**Other Names**

Adenylate kinase 4, mitochondrial {ECO:0000255|HAMAP-Rule:MF_03170}, AK 4 {ECO:0000255|HAMAP-Rule:MF_03170}, 27410 {ECO:0000255|HAMAP-Rule:MF_03170}, 2746 {ECO:0000255|HAMAP-Rule:MF_03170}, Adenylate kinase 3-like {ECO:0000255|HAMAP-Rule:MF_03170}, GTP:AMP phosphotransferase AK4 {ECO:0000255|HAMAP-Rule:MF_03170}, AK4 {ECO:0000255|HAMAP-Rule:MF_03170}

Target/Specificity

The synthetic peptide sequence used to generate the antibody [AP8132c](/product/products/AP8132c) was selected from the N-term region of human AK3. 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.

AK3 Antibody (N-term F210) Blocking Peptide - Protein Information**Name** AK4 {ECO:0000255|HAMAP-Rule:MF_03170}**Function**

Involved in maintaining the homeostasis of cellular nucleotides by catalyzing the interconversion of nucleoside phosphates (PubMed: [19073142](http://www.uniprot.org/citations/19073142), PubMed: [19766732](http://www.uniprot.org/citations/19766732), PubMed: [23416111](http://www.uniprot.org/citations/23416111), PubMed: [24767988](http://www.uniprot.org/citations/24767988)). Efficiently phosphorylates AMP and dAMP using ATP as phosphate donor, but phosphorylates only AMP when using GTP as phosphate donor (PubMed: [19073142](http://www.uniprot.org/citations/19073142), PubMed: [19073142](http://www.uniprot.org/citations/19073142)).

[19766732](http://www.uniprot.org/citations/19766732), PubMed: [23416111](http://www.uniprot.org/citations/23416111)). Also displays broad nucleoside diphosphate kinase activity (PubMed: [19073142](http://www.uniprot.org/citations/19073142), PubMed: [19766732](http://www.uniprot.org/citations/19766732), PubMed: [23416111](http://www.uniprot.org/citations/23416111)). Plays a role in controlling cellular ATP levels by regulating phosphorylation and activation of the energy sensor protein kinase AMPK (PubMed: [24767988](http://www.uniprot.org/citations/24767988), PubMed: [26980435](http://www.uniprot.org/citations/26980435)). Plays a protective role in the cellular response to oxidative stress (PubMed: [19130895](http://www.uniprot.org/citations/19130895), PubMed: [23474458](http://www.uniprot.org/citations/23474458), PubMed: [26980435](http://www.uniprot.org/citations/26980435)).

Cellular Location

Mitochondrion matrix {ECO:0000255|HAMAP- Rule:MF_03170, ECO:0000269|PubMed:11485571, ECO:0000269|PubMed:19766732, ECO:0000269|PubMed:26980435}

Tissue Location

Highly expressed in kidney, moderately expressed in heart and liver and weakly expressed in brain

AK3 Antibody (N-term F210) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

AK3 Antibody (N-term F210) Blocking Peptide - Images

AK3 Antibody (N-term F210) Blocking Peptide - Background

AK3 is a member of the adenylate kinase family of enzymes. The encoded protein is localized to the mitochondrial matrix. Adenylate kinases regulate the adenine and guanine nucleotide compositions within a cell by catalyzing the reversible transfer of phosphate group among these nucleotides. Five isozymes of adenylate kinase have been identified in vertebrates. Expression of these isozymes is tissue-specific and developmentally regulated.

AK3 Antibody (N-term F210) Blocking Peptide - References

Biochem. J. 358 (PT 1), 225-232 (2001) Eur. J. Biochem. 261(2):509-517 (1999). Brain Res. Mol. Brain Res. 62(2):187-195 (1998). Genomics 13(3):537-542 (1992). Cytogenet. Cell Genet. 32 (1-4), 144-152 (1982).