

Adenylate kinase 4 Antibody
Rabbit mAb
Catalog # AP92743**Specification****Adenylate kinase 4 Antibody - Product Information**

Application **WB, IHC, ICC**
Primary Accession **[P27144](#)**
Clonality **Monoclonal**
Other Names
AK3; AK3L1; AK3L2; AK4;

Isotype **Rabbit IgG**
Host **Rabbit**
Calculated MW **25268 Da**

Adenylate kinase 4 Antibody - Additional Information

Purification **Affinity-chromatography**
Immunogen **A synthesized peptide derived from human Adenylate kinase 4**
Description **Catalyzes the reversible transfer of the terminal phosphate group between ATP and AMP. May also be active with GTP.**
Storage Condition and Buffer **Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.**

Adenylate kinase 4 Antibody - Protein Information

Name AK4 ([HGNC:363](#))

Function

Broad-specificity mitochondrial nucleoside phosphate kinase involved in cellular nucleotide homeostasis by catalyzing nucleoside- phosphate interconversions (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)). Similar to other adenylate kinases, preferentially catalyzes the phosphorylation of the nucleoside monophosphate AMP with ATP as phosphate donor to produce ADP (PubMed:[19766732](http://www.uniprot.org/citations/19766732)). Phosphorylates only AMP when using GTP as phosphate donor (PubMed:[19766732](http://www.uniprot.org/citations/19766732)). In vitro, can also catalyze the phosphorylation of CMP, dAMP and dCMP and use GTP as an alternate phosphate donor (PubMed:[19766732](http://www.uniprot.org/citations/19766732), PubMed:[23416111](http://www.uniprot.org/citations/23416111)

target="_blank">23416111). Moreover, exhibits a diphosphate kinase activity, producing ATP, CTP, GTP, UTP, TTP, dATP, dCTP and dGTP from the corresponding diphosphate substrates with either ATP or GTP as phosphate donors (PubMed:23416111). Plays a role in controlling cellular ATP levels by regulating phosphorylation and activation of the energy sensor protein kinase AMPK (PubMed:24767988, PubMed:26980435). Plays a protective role in the cellular response to oxidative stress (PubMed:19130895, PubMed:23474458, PubMed: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

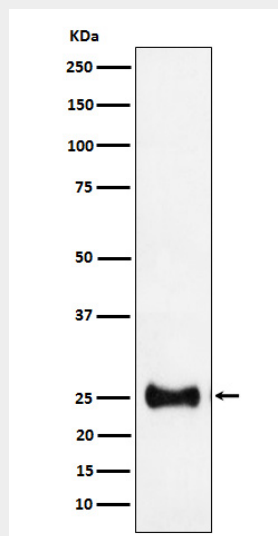
Highly expressed in kidney, moderately expressed in heart and liver and weakly expressed in brain

Adenylate kinase 4 Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Adenylate kinase 4 Antibody - Images



Western blot analysis of Adenylate kinase 4 expression in HepG2 cell lysate.