

# Adenylate kinase 4 Antibody

Rabbit mAb

Catalog # AP92743

## Product Information

<b>Application</b>	WB, IHC, IF, ICC, IHF
<b>Primary Accession</b>	<a href="#">P27144</a>
<b>Reactivity</b>	Human
<b>Clonality</b>	Monoclonal
<b>Other Names</b>	AK3; AK3L1; AK3L2; AK4;
<b>Isotype</b>	Rabbit IgG
<b>Host</b>	Rabbit
<b>Calculated MW</b>	25268

## Additional Information

<b>Dilution</b>	WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200
<b>Purification</b>	Affinity-chromatography
<b>Immunogen</b>	A synthesized peptide derived from human Adenylate kinase 4
<b>Description</b>	Catalyzes the reversible transfer of the terminal phosphate group between ATP and AMP. May also be active with GTP.
<b>Storage Condition and Buffer</b>	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.

## Protein Information

<b>Name</b>	AK4 ( <a href="#">HGNC:363</a> )
<b>Function</b>	<p>Broad-specificity mitochondrial nucleoside phosphate kinase involved in cellular nucleotide homeostasis by catalyzing nucleoside- phosphate interconversions (PubMed:<a href="#">19073142</a>, PubMed:<a href="#">19766732</a>, PubMed:<a href="#">23416111</a>, PubMed:<a href="#">24767988</a>). Similar to other adenylate kinases, preferentially catalyzes the phosphorylation of the nucleoside monophosphate AMP with ATP as phosphate donor to produce ADP (PubMed:<a href="#">19766732</a>). Phosphorylates only AMP when using GTP as phosphate donor (PubMed:<a href="#">19766732</a>). In vitro, can also catalyze the phosphorylation of CMP, dAMP and dCMP and use GTP as an alternate phosphate donor (PubMed:<a href="#">19766732</a>, PubMed:<a href="#">23416111</a>). 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:<a href="#">23416111</a>). Plays a role in controlling cellular ATP levels by regulating phosphorylation and activation of the energy sensor protein kinase AMPK (PubMed:<a href="#">24767988</a>, PubMed:<a href="#">26980435</a>). Plays a protective role in the cellular response to oxidative stress (PubMed:<a href="#">19130895</a>, PubMed:<a href="#">23474458</a>, PubMed:<a href="#">26980435</a>).</p>

**Cellular Location**

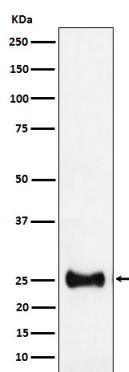
Mitochondrion matrix {ECO:0000255 | HAMAP- Rule:MF\_03170, ECO:0000269 | PubMed:11485571, ECO:0000269 | PubMed:19766732, ECO:0000269 | PubMed:26980435}

**Tissue Location**

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

**Images**

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

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.