

AK4 / Adenylate Kinase 4 Antibody (aa1-209)
Rabbit Polyclonal Antibody
Catalog # ALS16884

Specification

AK4 / Adenylate Kinase 4 Antibody (aa1-209) - Product Information

Application	IHC, ICC, WB
Primary Accession	P27144
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	25268

AK4 / Adenylate Kinase 4 Antibody (aa1-209) - 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}, 2.7.4.10 {ECO:0000255|HAMAP-Rule:MF_03170}, 2.7.4.6 {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

Human AK4 / Adenylate Kinase 4

Reconstitution & Storage

0.1 M Tris-glycine, pH 7.0, 10% glycerol, 0.01% Thimerosal. Keep as concentrated solution. Aliquot and store at -20°C or below. Avoid multiple freeze-thaw cycles.

Precautions

AK4 / Adenylate Kinase 4 Antibody (aa1-209) is for research use only and not for use in diagnostic or therapeutic procedures.

AK4 / Adenylate Kinase 4 Antibody (aa1-209) - 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, PubMed:19766732, PubMed:23416111, PubMed:24767988). Similar to other adenylate kinases, preferentially catalyzes the phosphorylation of the nucleoside monophosphate AMP with ATP as phosphate donor to produce ADP (PubMed:<a

[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" target="_blank">23416111](http://www.uniprot.org/citations/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](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" target="_blank">19130895](http://www.uniprot.org/citations/19130895), PubMed:[23474458" target="_blank">23474458](http://www.uniprot.org/citations/23474458), PubMed:[26980435" target="_blank">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

Volume

50 µl

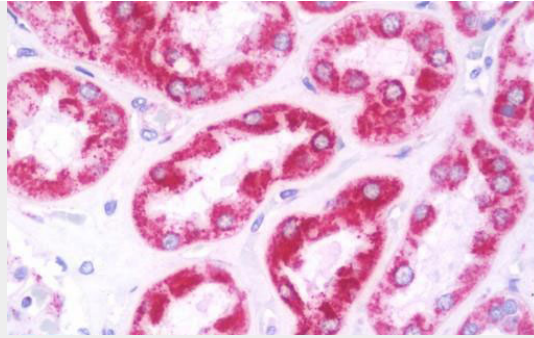
AK4 / Adenylate Kinase 4 Antibody (aa1-209) - Protocols

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

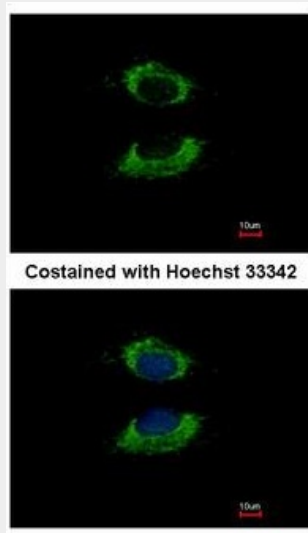
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

AK4 / Adenylate Kinase 4 Antibody (aa1-209) - Images

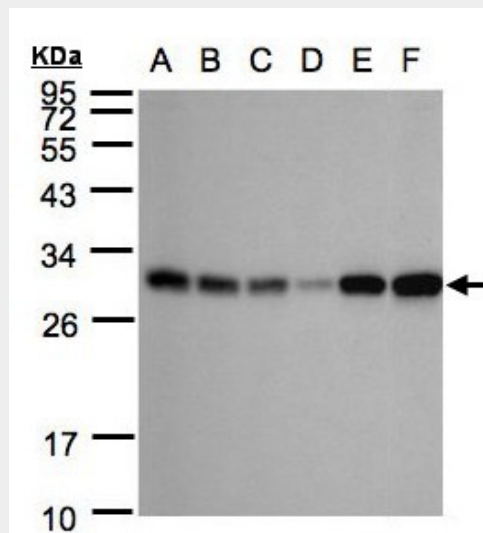




Anti-AK4 / Adenylate Kinase 4 antibody IHC staining of human kidney.



Immunofluorescence of methanol-fixed HeLa using Adenylate kinase 3 antibody at 1:100 dilution.



Sample (30 ug whole cell lysate).