

Anti-Adenylate kinase 4 Rabbit Monoclonal Antibody
Catalog # ABO16160**Specification****Anti-Adenylate kinase 4 Rabbit Monoclonal Antibody - Product Information**

Application	WB, IHC, IF, ICC
Primary Accession	P27144
Host	Rabbit
Isotype	IgG
Reactivity	Human
Clonality	Monoclonal
Format	Liquid

Description

Anti-Adenylate kinase 4 Rabbit Monoclonal Antibody . Tested in WB, IHC, ICC/IF applications. This antibody reacts with Human.

Anti-Adenylate kinase 4 Rabbit Monoclonal Antibody - 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, ECO:0000269|PubMed:19766732, ECO:0000269|PubMed:23416111}, 2.7.4.6 {ECO:0000255|HAMAP-Rule:MF_03170, ECO:0000269|PubMed:19766732, ECO:0000269|PubMed:23416111}, 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}

Calculated MW

25 kDa KDa

Application Details

WB 1:500-1:2000
IHC 1:50-1:200
ICC/IF 1:50-1:200

Contents

Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen

A synthesized peptide derived from human Adenylate kinase 4

Purification

Affinity-chromatography

Storage

Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Anti-Adenylate kinase 4 Rabbit Monoclonal 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), PubMed:[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), 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

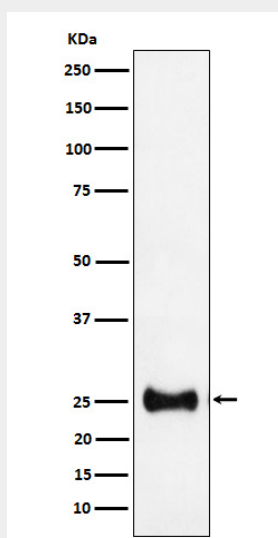
Highly expressed in kidney, moderately expressed in heart and liver and weakly expressed in brain

Anti-Adenylate kinase 4 Rabbit Monoclonal 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](#)

Anti-Adenylate kinase 4 Rabbit Monoclonal Antibody - Images



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