

KD-Validated Anti-Adenylate kinase 4 Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI1496**Specification****KD-Validated Anti-Adenylate kinase 4 Rabbit Monoclonal Antibody - Product Information**

Application	WB, FC
Primary Accession	P27144
Reactivity	Human
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 25 kDa , observed, 25 kDa KDa
Gene Name	AK4
Aliases	AK4; Adenylate Kinase 4; AK3L1; AK3; Adenylate Kinase 4, Mitochondrial; Adenylate Kinase 3-Like 1; AK 4; GTP:AMP Phosphotransferase AK4, Mitochondrial; Adenylate Kinase Isoenzyme 4, Mitochondrial; Epididymis Secretory Sperm Binding Protein; Nucleoside-Triphosphate-Adenylate Kinase; Mitochondrial Adenylate Kinase-3; GTP:AMP Phosphotransferase AK4; ATP-AMP Transphosphorylase; Adenylate Kinase 3-Like; Adenylate Kinase 3; EC 2.7.4.10; EC 2.7.4.6; EC 2.7.4.3; EC 2.7.4; AK3L2
Immunogen	A synthesized peptide derived from human Adenylate kinase 4

KD-Validated Anti-Adenylate kinase 4 Rabbit Monoclonal Antibody - Additional Information

Gene ID	205
Other Names	
Adenylate kinase 4, mitochondrial, 2.7.4.4, 2.7.4.6, Adenylate kinase 3-like {ECO:0000255 HAMAP-Rule:MF_03170}, GTP:AMP phosphotransferase AK4 {ECO:0000255 HAMAP-Rule:MF_03170}, AK4 (HGNC:363)	

KD-Validated 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, 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:19766732). Phosphorylates only AMP when using GTP as phosphate donor (PubMed:19766732). In vitro, can also catalyze the phosphorylation of CMP, dAMP and dCMP and use GTP as an alternate phosphate donor (PubMed:19766732, PubMed: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

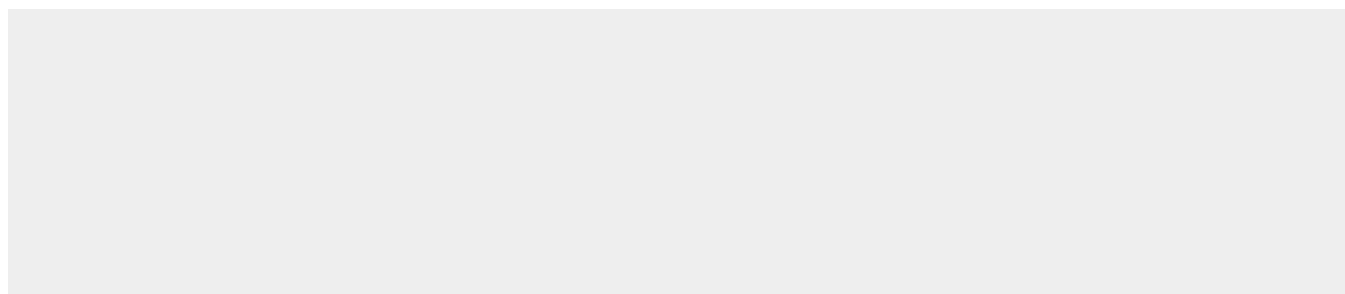
Highly expressed in kidney, moderately expressed in heart and liver and weakly expressed in brain

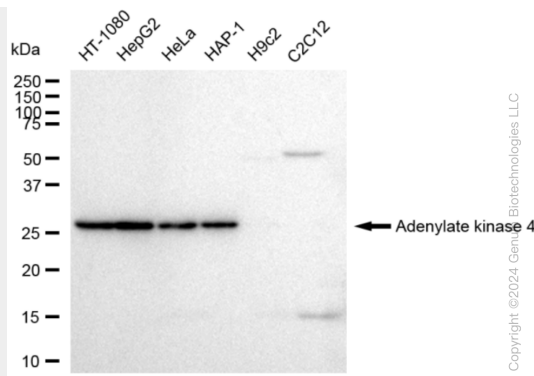
KD-Validated Anti-Adenylate kinase 4 Rabbit Monoclonal Antibody - Protocols

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

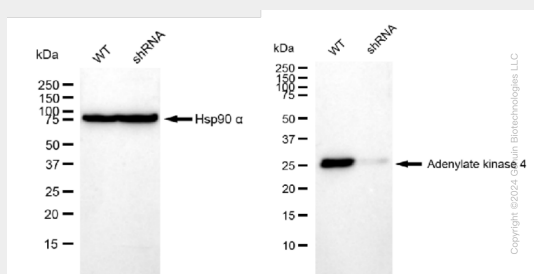
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

KD-Validated Anti-Adenylate kinase 4 Rabbit Monoclonal Antibody - Images

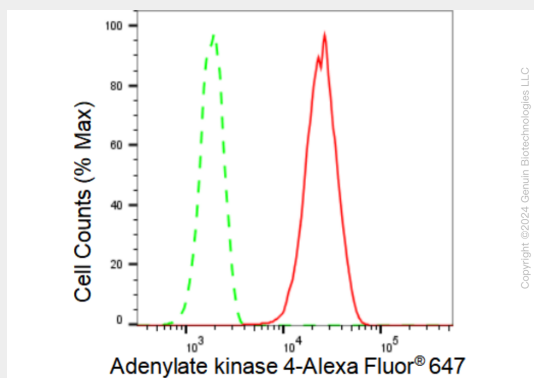




Western blotting analysis using anti-Adenylate kinase 4 antibody (Cat#AGI1496). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Adenylate kinase 4 antibody (Cat#AGI1496, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-Adenylate kinase 4 antibody (Cat#AGI1496). Adenylate kinase 4 expression in wild type (WT) and Adenylate kinase 4 shRNA knockdown (KD) HT-1080 cells with 30 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-Adenylate kinase 4 antibody (Cat#AGI1496, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Adenylate kinase 4 expression in HepG2 cells using Adenylate kinase 4 antibody (Cat#AGI1496, 1:2,000). Green, isotype control; red, Adenylate kinase 4.