

Anti-Adenylate Kinase 1 Picoband Antibody

Catalog # ABO11651

Product Information

Application	WB
Primary Accession	P00568
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Adenylate kinase isoenzyme 1(AK1) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	203
Other Names	Adenylate kinase isoenzyme 1 {ECO:0000255 HAMAP-Rule:MF_03171}, AK 1 {ECO:0000255 HAMAP-Rule:MF_03171}, 2.7.4.3 {ECO:0000255 HAMAP-Rule:MF_03171}, 2.7.4.6 {ECO:0000255 HAMAP-Rule:MF_03171}, ATP-AMP transphosphorylase 1 {ECO:0000255 HAMAP-Rule:MF_03171}, ATP:AMP phosphotransferase {ECO:0000255 HAMAP-Rule:MF_03171}, Adenylate monophosphate kinase {ECO:0000255 HAMAP-Rule:MF_03171}, Myokinase {ECO:0000255 HAMAP-Rule:MF_03171}, AK1 {ECO:0000255 HAMAP-Rule:MF_03171}
Calculated MW	21635
Application Details	Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat
Subcellular Localization	Cytoplasm.
Source	Eukaryota
Protein Name	Adenylate kinase isoenzyme 1
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human AK1 (149-189aa RLETTYKATEPVIAFYEKRGIVRKVN AEGSVDSVFSQVCTH), different from the related mouse sequence by seven amino acids, and from the related rat sequence by four amino acids.
Purification	Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins.

Storage

At -20 °C for one year. After reconstitution, at 4 °C for one month. It can also be aliquotted and stored frozen at -20 °C for a longer time. Avoid repeated freezing and thawing.

Protein Information**Name**

AK1 {ECO:0000255|HAMAP-Rule:MF_03171, ECO:0000312|HGNC:HGNC:361}

Function

Catalyzes the reversible transfer of the terminal phosphate group between ATP and AMP. Also displays broad nucleoside diphosphate kinase activity. Plays an important role in cellular energy homeostasis and in adenine nucleotide metabolism (By similarity) (PubMed:[21080915](#), PubMed:[23416111](#), PubMed:[2542324](#)). Also catalyzes at a very low rate the synthesis of thiamine triphosphate (ThTP) from thiamine diphosphate (ThDP) and ADP (By similarity).

Cellular Location

Cytoplasm {ECO:0000250|UniProtKB:P05081}.

Background

This gene encodes an adenylate kinase enzyme involved in energy metabolism and homeostasis of cellular adenine nucleotide ratios in different intracellular compartments. This gene is highly expressed in skeletal muscle, brain and erythrocytes. Certain mutations in this gene resulting in a functionally inadequate enzyme are associated with a rare genetic disorder causing nonspherocytic hemolytic anemia. Alternative splicing of this gene results in multiple transcript variants encoding different isoforms.

Images

Western blot analysis of Adenylate Kinase 1 expression in rat skeletal muscle extract (lane 1), mouse cardiac muscle extract (lane 2) and COLO320 whole cell lysates (lane 3). Adenylate Kinase 1 at 22KD was detected using rabbit anti- Adenylate Kinase 1 Antigen Affinity purified polyclonal antibody (Catalog # ABO11651) at 0.5 µg/mL. The blot was developed using chemiluminescence (ECL) method .

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