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Deoxyguanosine Kinase (DGUOK) Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7086A

Specification

Deoxyguanosine Kinase (DGUOK) Antibody (N-term) - Product Information

Application	**WB,E**
Primary Accession	Q16854
Other Accession	NP_550438
Reactivity	**Human, Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**32056**
Antigen Region	**1-30**

Deoxyguanosine Kinase (DGUOK) Antibody (N-term) - Additional Information

Gene ID 1716

Other Names
Deoxyguanosine kinase, mitochondrial, dGK, DGUOK, DGK

Target/Specificity
This Deoxyguanosine Kinase (DGUOK) antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1-30 amino acids from the N-terminal region of human Deoxyguanosine Kinase (DGUOK).

Dilution
WB~~1:1000
E~~Use at an assay dependent concentration.

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Deoxyguanosine Kinase (DGUOK) Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Deoxyguanosine Kinase (DGUOK) Antibody (N-term) - Protein Information

Name DGUOK

Synonyms DGK

Function Phosphorylates deoxyguanosine and deoxyadenosine in the mitochondrial matrix, with the highest efficiency for deoxyguanosine (PubMed:11687801, PubMed:17073823, PubMed:23043144, PubMed:8692979, PubMed:8706825). In non-replicating cells, where cytosolic dNTP synthesis is down-regulated, mtDNA synthesis depends solely on DGUOK and TK2. Phosphorylates certain nucleoside analogs (By similarity). Widely used as target of antiviral and chemotherapeutic agents.

Cellular Location
Mitochondrion {ECO:0000250|UniProtKB:Q9QX60}.

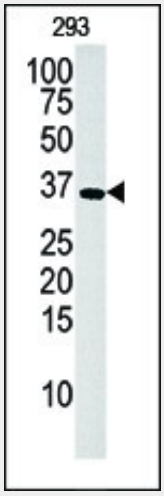
Tissue Location
Ubiquitous. Highest expression in muscle, brain, liver and lymphoid tissues.

Deoxyguanosine Kinase (DGUOK) Antibody (N-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Deoxyguanosine Kinase (DGUOK) Antibody (N-term) - Images



Western blot analysis of anti-hDGUOK-M1 Pab (Cat. #AP7086a) in 293 cell line lysate (35ug/lane). hDGUOK-M1(arrow) was detected using the purified Pab.

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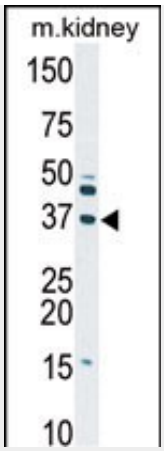

Western blot analysis of anti-DGUOK Pab (Cat. #AP7086a) in mouse kidney tissue lysate (35ug/lane). DGUOK(arrow) was detected using the purified Pab.

Deoxyguanosine Kinase (DGUOK) Antibody (N-term) - Background

Mitochondrial deoxyguanosine kinase (DGUOK) is required for the phosphorylation of several deoxyribonucleosides and certain purine deoxykribonucleoside analogs widely employed as antiviral and chemotherapeutic agents. Purine deoxyribonucleoside analogs are extensively used in treatment of lymphoproliferative disorders. These compounds are administered as pro-drugs, and their efficiency is dependent on intracellular phosphorylation to the corresponding triphosphates. In mammalian cells, the phosphorylation of purine deoxyribonucleosides is mediated predominantly by 2 deoxyribonucleoside kinases: cytosolic deoxycytidine kinase (DCK) and mitochondrial deoxyguanosine kinase (DGUOK also known as DGK). DGUOK expression is ubiquitous, with highest levels in muscle, brain, liver and lymphoid tissues. Defects in DGUOK are a cause of mitochondrial DNA depletion syndrome (MDS). MDS is a clinically heterogeneous group of disorders characterized by a reduction in mitochondrial DNA (mtDNA) copy number. Primary mtDNA depletion is inherited as an autosomal recessive trait and may affect single organs, typically muscle or liver, or multiple tissues. Mitochondrial DNA depletion syndromes are phenotypically heterogeneous, autosomal recessive disorders characterized by tissue-specific reduction in mtDNA copy number. Affected individuals with the hepatocerebral form of mtDNA depletion syndrome have early progressive liver failure and neurologic abnormalities, hypoglycemia, and increased lactate in body fluids.