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Rabbit Anti-DGUOK antibody

SL14277R

Product Name	DGUOK
Chinese Name	脱氧鸟苷激酶抗体
Alias	Deoxyguanosine kinase mitochondrial; dGK; Deoxyguanosine kinase; DGUOK; DGUOK_HUMAN; Deoxyguanosine kinase, mitochondrial.
Research Area	immunology Neurobiology Kinases and Phosphatases
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	(predicted: Human, Mouse, Rat, Dog, Cow, Horse, Rabbit, Sheep,)
Applications	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	28kDa
Cellular localization	cytoplasmic
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human DGUOK: 101-200/277
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed
Product	In mammalian cells, the phosphorylation of purine deoxyribonucleosides is mediated

Detail

predominantly by two deoxyribonucleoside kinases, cytosolic deoxycytidine kinase and mitochondrial deoxyguanosine kinase. The protein encoded by this gene is responsible for phosphorylation of purine deoxyribonucleosides in the mitochondrial matrix. In addition, this protein phosphorylates several purine deoxyribonucleoside analogs used in the treatment of lymphoproliferative disorders, and this phosphorylation is critical for the effectiveness of the analogs. Alternative splice variants encoding different protein isoforms have been described for this gene. [provided by RefSeq, Jul 2008]

Function:
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.

Subunit:
Homodimer.

Subcellular Location:
Mitochondrion.

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

DISEASE:
Mitochondrial DNA depletion syndrome 3 (MTDPS3) [MIM:251880]: A disorder due to mitochondrial dysfunction characterized by onset in infancy of progressive liver failure, hypoglycemia, increased lactate in body fluids, and neurologic abnormalities including hypotonia, encephalopathy, peripheral neuropathy. Affected tissues show both decreased activity of the mtDNA-encoded respiratory chain complexes and mtDNA depletion. Note=The disease is caused by mutations affecting the gene represented in this entry.

Similarity:
Belongs to the DCK/DGK family.

SWISS:
Q16854

Gene ID:
1716

Database links:

Entrez Gene: 1716 Human

Entrez Gene: 27369 Mouse

Omim: 601465 Human

SwissProt: Q16854 Human

SwissProt: Q4ZG09 Human

SwissProt: Q7L1W9 Human

SwissProt: Q9BVK7 Human

SwissProt: Q3TKB4 Mouse

SwissProt: Q504N4 Mouse

SwissProt: Q8CBU2 Mouse

SwissProt: Q91XI5 Mouse

SwissProt: Q9QX60 Mouse