

DGUOK Rabbit pAb

Catalog # AP97831

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q16854
Other Accession	Q16854
Predicted	Rat, Human, Mouse, Rabbit, Dog, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	32056
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human DGUOK
Epitope Specificity	101-200/277
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the DCK/DGK family.
SUBUNIT	Homodimer.
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.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	In mammalian cells, the phosphorylation of purine deoxyribonucleosides is mediated 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]

Additional Information

Gene ID	1716
Other Names	MTDPS3; NCPH; NCPH1; PEOB4; dGK; dGK1; dGK2; dGK3; DGUOK_HUMAN; DGUOK; Deoxyadenosine kinase, mitochondrial; 2.7.1.113; Q4ZG09_HUMAN; Q7L1W9_HUMAN; Q9BVK7_HUMAN; Q3TKB4_MOUSE; Q504N4_MOUSE;

Q8CBU2_MOUSE; Q91XI5_MOUSE; DGUOK_MOUSE; deoxyguanosine kinase

Dilution	IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:500 0-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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.

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