



sMtCK Polyclonal Antibody

Catalog No	YP-Ab-14997
Isotype	IgG
Reactivity	Human;Mouse;Rat
Applications	WB;IHC;IF;ELISA
Gene Name	CKMT2
Immunogen	The antiserum was produced against synthesized peptide derived from human CKMT2. AA range:231-280
Specificity	sMtCK Polyclonal Antibody detects endogenous levels of sMtCK protein.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/40000. Not yet tested in other applications.
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	SMTCK;CKMT2;Creatine kinase S-type mitochondrial;Creatine kinase S-type; mitochondrial;Basic-type mitochondrial creatine kinase;Mib-CK;Sarcomeric mitochondrial creatine kinase;S-MtCK
Observed Band	48kD
Calculated Molecular Weight	48kD
Cell Pathway	Mitochondrion inner membrane; Peripheral membrane protein; Intermembrane side.
Tissue Specificity	Sarcomere-specific. Found only in heart and skeletal muscles.
Function	catalytic activity:ATP + creatine = ADP + phosphocreatine.,function:Reversibly catalyzes the transfer of phosphate between ATP and various phosphogens (e.g. creatine phosphate). Creatine kinase isoenzymes play a central role in energy transduction in tissues with large, fluctuating energy demands, such as skeletal muscle, heart, brain and spermatozoa.,miscellaneous:Mitochondrial creatine kinase binds cardiolipin.,similarity:Belongs to the ATP:guanido phosphotransferase family.,subunit:Exists as an octamer composed of four CKMT2 homodimers.,tissue specificity:Sarcomere-specific. Found only in heart



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Background

creatine kinase, mitochondrial 2(CKMT2) Homo sapiens Mitochondrial creatine kinase (MtCK) is responsible for the transfer of high energy phosphate from mitochondria to the cytosolic carrier, creatine. It belongs to the creatine kinase isoenzyme family. It exists as two isoenzymes, sarcomeric MtCK and ubiquitous MtCK, encoded by separate genes. Mitochondrial creatine kinase occurs in two different oligomeric forms: dimers and octamers, in contrast to the exclusively dimeric cytosolic creatine kinase isoenzymes. Sarcomeric mitochondrial creatine kinase has 80% homology with the coding exons of ubiquitous mitochondrial creatine kinase. This gene contains sequences homologous to several motifs that are shared among some nuclear genes encoding mitochondrial proteins and thus may be essential for the coordinated activation of these genes during mitochondrial biogenesis. Three transcript variants encoding the same protein have been found for this gen

matters needing attention

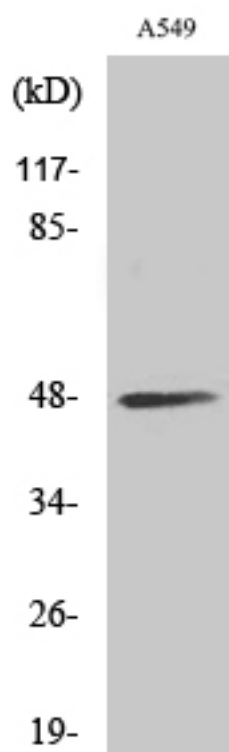
Avoid repeated freezing and thawing!

Usage suggestions

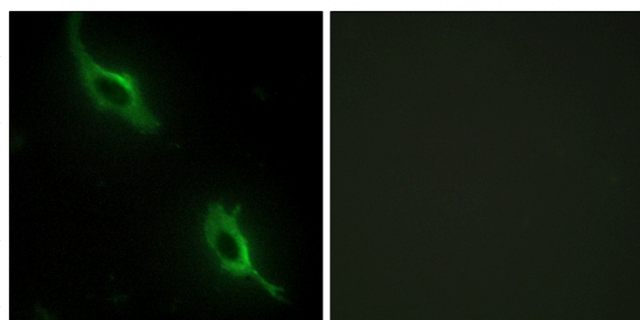
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



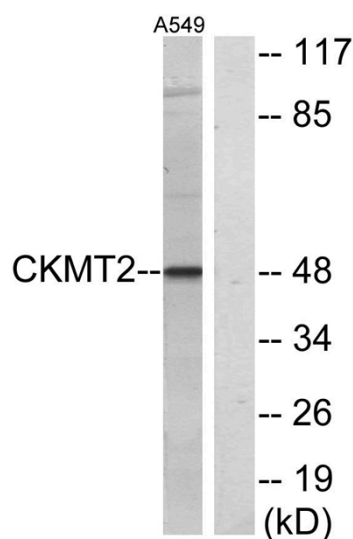
Products Images



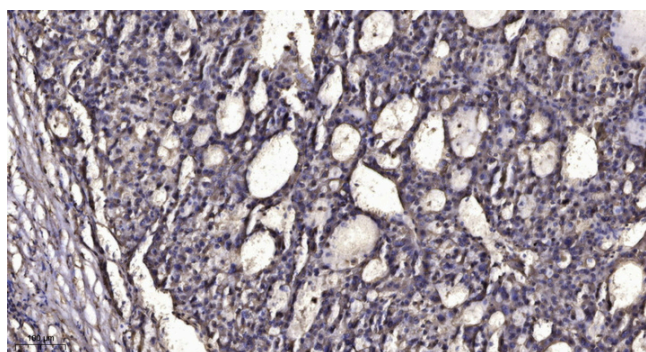
Western Blot analysis of various cells using sMtCK Polyclonal Antibody



Immunofluorescence analysis of NIH/3T3 cells, using CKMT2 Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from A549 cells, using CKMT2 Antibody. The lane on the right is blocked with the synthesized peptide.



Immunohistochemical analysis of paraffin-embedded human liver cancer. 1, Antibody was diluted at 1:200(4° overnight). 2, Tris-EDTA, pH9.0 was used for antigen retrieval. 3, Secondary antibody was diluted at 1:200(room temperature, 45min).