

HXK II Monoclonal Antibody

Catalog No :	YM0350
Reactivity :	Human
Applications :	WB;IHC;IF;FCM;ELISA
Target :	HXK II
Fields :	>>Glycolysis / Gluconeogenesis;>>Fructose and mannose metabolism;>>Galactose metabolism;>>Starch and sucrose metabolism;>>Amino sugar and nucleotide sugar metabolism;>>Neomycin, kanamycin and gentamicin biosynthesis;>>Metabolic pathways;>>Carbon metabolism;>>Biosynthesis of nucleotide sugars;>>HIF-1 signaling pathway;>>Insulin signaling pathway;>>Type II diabetes mellitus;>>Carbohydrate digestion and absorption;>>Shigellosis;>>Central carbon metabolism in cancer
Gene Name :	HK2
Protein Name :	Hexokinase-2
Human Gene Id :	3099
Human Swiss Prot No :	P52789
Mouse Swiss Prot No :	O08528
Immunogen :	Purified recombinant fragment of human HXK II expressed in E. Coli.
Specificity :	HXK II Monoclonal Antibody detects endogenous levels of HXK II protein.
Formulation :	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source :	Monoclonal, Mouse
Dilution :	WB 1:500 - 1:2000. IHC 1:200 - 1:1000. Flow cytometry: 1:200 - 1:400. ELISA: 1:10000.. IF 1:50-200
Purification :	Affinity purification

Storage Stability : -15°C to -25°C/1 year(Do not lower than -25°C)

Molecularweight : 102kD

Cell Pathway : Glycolysis / Gluconeogenesis;Fructose and mannose metabolism;Galactose metabolism;Starch and sucrose metabolism;Amino sugar and nucleotide sugar metabolism;Insulin_Receptor;Type II diabetes mellitus;

P References : 1. Cell. 2006 May 19;125(4):801-14.
2. Cancer Sci. 2008 Feb;99(2):260-6.
3. Med Oncol. 2009;26(3):303-8.

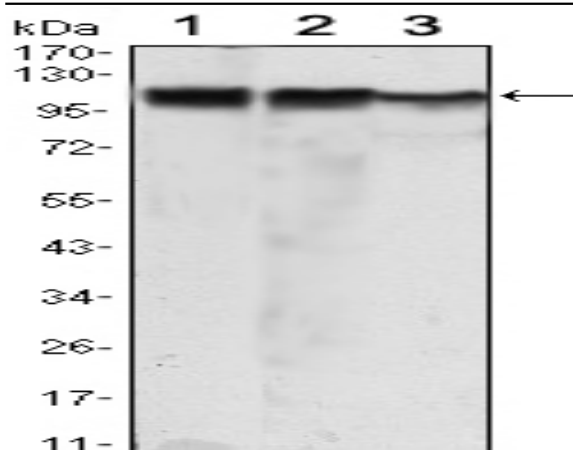
Background : Hexokinases phosphorylate glucose to produce glucose-6-phosphate, the first step in most glucose metabolism pathways. This gene encodes hexokinase 2, the predominant form found in skeletal muscle. It localizes to the outer membrane of mitochondria. Expression of this gene is insulin-responsive, and studies in rat suggest that it is involved in the increased rate of glycolysis seen in rapidly growing cancer cells. [provided by RefSeq, Apr 2009],

Function : catalytic activity:ATP + D-hexose = ADP + D-hexose 6-phosphate.,domain:The N- and C-terminal halves of this hexokinase show extensive sequence similarity to each other. The catalytic activity is associated with the C-terminus while regulatory function is associated with the N-terminus.,enzyme regulation:Hexokinase is an allosteric enzyme inhibited by its product Glc-6-P.,miscellaneous:In vertebrates there are four major glucose-phosphorylating isoenzymes, designated hexokinase I, II, III and IV (glucokinase).,online information:Hexokinase entry,pathway:Carbohydrate metabolism; hexose metabolism.,polymorphism:Although found in NIDDM patients, genetic variations of HK2 do not contribute to the disease.,similarity:Belongs to the hexokinase family.,subcellular location:Its hydrophobic N-terminal sequence may be involved in membrane binding.,subunit:Monomer.,tissue specificity:Predominant hex

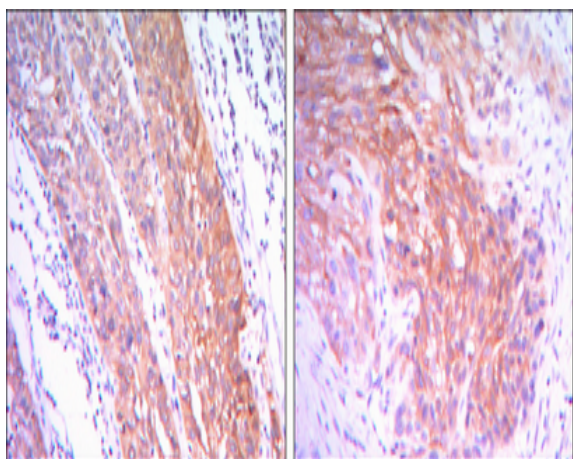
Subcellular Location : Mitochondrion outer membrane ; Peripheral membrane protein . Cytoplasm, cytosol . The mitochondrial-binding peptide (MBP) region promotes association with the mitochondrial outer membrane (PubMed:29298880). The interaction with the mitochondrial outer membrane via the mitochondrial-binding peptide (MBP) region promotes higher stability of the protein (PubMed:29298880). Release from the mitochondrial outer membrane into the cytosol induces permeability transition pore (PTP) opening and apoptosis (PubMed:18350175). .

Expression : Predominant hexokinase isozyme expressed in insulin-responsive tissues such as skeletal muscle.

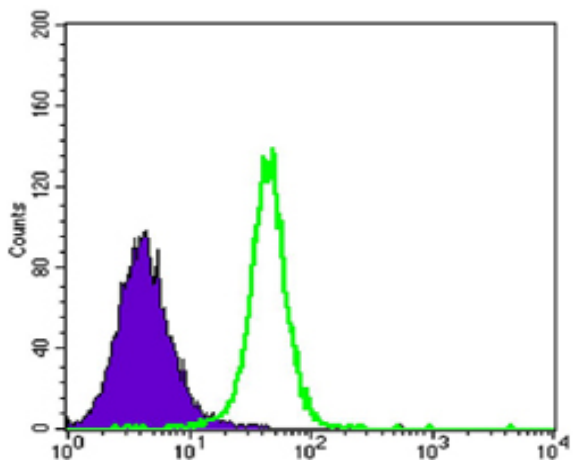
Products Images



Western Blot analysis using HXK II Monoclonal Antibody against Jurkat (1), HeLa (2) and HEK293 (3) cell lysate.



Immunohistochemistry analysis of paraffin-embedded esophagus cancer tissues (left) and human lung cancer (right) with DAB staining using HXK II Monoclonal Antibody.



Flow cytometric analysis of K562 cells using HXK II Monoclonal Antibody (green) and negative control (purple).