

GCK Polyclonal Antibody

Catalog No: YT1872

Reactivity: Human; Mouse; Rat

Applications: WB;ELISA

Target: GCK

Fields: >>Glycolysis / Gluconeogenesis;>>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;>>Insulin signaling pathway;>>Insulin secretion;>>Prolactin signaling pathway;>>Glucagon signaling pathway;>>Type II diabetes mellitus;>>Maturity onset diabetes of the

young;>>Central carbon metabolism in cancer

Gene Name: GCK

Protein Name: Glucokinase

Human Gene Id: 2645

Human Swiss Prot

No:

P35557

P52792

Mouse Gene Id:

Gene ld: 103988

Mouse Swiss Prot

No:

Rat Gene ld: 24385

Rat Swiss Prot No: P17712

Immunogen: The antiserum was produced against synthesized peptide derived from human

GCK. AA range:43-92

Specificity: GCK Polyclonal Antibody detects endogenous levels of GCK protein.

Formulation : Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

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Source: Polyclonal, Rabbit, IgG

Dilution: WB 1:500 - 1:2000. ELISA: 1:10000. Not yet tested in other applications.

Purification: The antibody was affinity-purified from rabbit antiserum by affinity-

chromatography using epitope-specific immunogen.

Concentration: 1 mg/ml

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

Observed Band: 55kD

Cell Pathway: Glycolysis / Gluconeogenesis; Galactose metabolism; Starch and sucrose

metabolism; Amino sugar and nucleotide sugar

metabolism;Insulin Receptor;Type II diabetes mellitus;Maturity onset diabetes of

the yo

Background: Hexokinases phosphorylate glucose to produce glucose-6-phosphate, the first

step in most glucose metabolism pathways. Alternative splicing of this gene results in three tissue-specific forms of glucokinase, one found in pancreatic islet beta cells and two found in liver. The protein localizes to the outer membrane of mitochondria. In contrast to other forms of hexokinase, this enzyme is not inhibited by its product glucose-6-phosphate but remains active while glucose is

abundant. Mutations in this gene have been associated with non-insulin dependent diabetes mellitus (NIDDM), maturity onset diabetes of the young, type

2 (MODY2) and persistent hyperinsulinemic hypoglycemia of infancy (PHHI).

[provided by RefSeq, Apr 2009],

Function : catalytic activity:ATP + D-glucose = ADP + D-glucose

6-phosphate., disease: Defects in GCK are the cause of familial hyperinsulinemic hypoglycemia type 3 (HHF3) [MIM:602485]. HHF is the most common cause of persistent hypoglycemia in infancy. Unless early and aggressive intervention is undertaken, brain damage from recurrent episodes of hypoglycemia may occur., disease: Defects in GCK are the cause of maturity onset diabetes of the young type 2 (MODY2) [MIM:125851]; also shortened MODY-2. MODY

[MIM:606391] is a form of diabetes mellitus characterized by autosomal dominant transmission and early age of onset. Mutations in GCK result in mild chronic hyperglycemia due to reduced pancreatic beta cell responsiveness to glucose, decreased net accumulation of hepatic glycogen and increased hepatic

gluconeogenesis following meals., enzyme regulation: The use of alternative

promoters apparently enables

Subcellular Location:

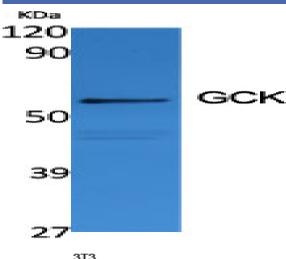
Cytoplasm . Nucleus . Mitochondrion . Under low glucose concentrations, GCK associates with GCKR and the inactive complex is recruited to the hepatocyte

nucleus...

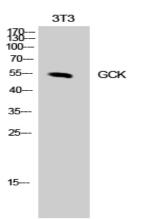
Expression:

Lung, Pancreas, Placenta,

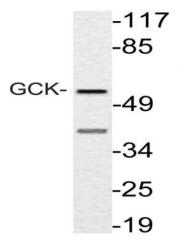
Products Images



Western Blot analysis of various cells using GCK Polyclonal Antibody diluted at 1:1000



Western Blot analysis of NIH-3T3 cells using GCK Polyclonal Antibody diluted at 1:1000



Western blot analysis of lysate from NIH/3T3 cells, using GCK antibody.