10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GCK Recombinant Mouse mAb

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Catalog # AP94567

Product Information

Application	WB, IHC-P, IHC-F, IF, ICC
Host	Rabbit
Clonality	Recombinant
Physical State	Liquid
Isotype	IgG1, Kappa
Purity	affinity purified by Protein G
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the hexokinase family.
SUBUNIT	Monomer.
DISEASE	Defects in GCK are the cause of maturity-onset diabetes of the young type 2 (MODY2) [MIM:125851]; also shortened MODY-2. MODY is a form of diabetes that is characterized by an autosomal dominant mode of inheritance, onset in childhood or early adulthood (usually before 25 years of age), a primary defect in insulin secretion and frequent insulin-independence at the beginning of the disease. Defects in GCK are the cause of familial hyperinsulinemic hypoglycemia type 3 (HHF3) [MIM:602485]; also known as persistent hyperinsulinemic hypoglycemia of infancy (PHHI) or congenital hyperinsulinism. 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.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Hexokinases phosphorylate glucose to produce glucose 6 phosphate, thus committing glucose to the glycolytic pathway. 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, also called maturity onset diabetes of the young, type 2; mutations have also been associated with persistent hyperinsulinemic hypoglycemia of infancy (PHHI).

Additional Information

Target/Specificity	Isoform 1 is expressed in pancreas. Isoform 2 and isoform 3 is expressed in liver.
Dilution	WB=1:200-1:1000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:20-1:50,IF=0
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce

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.

Background

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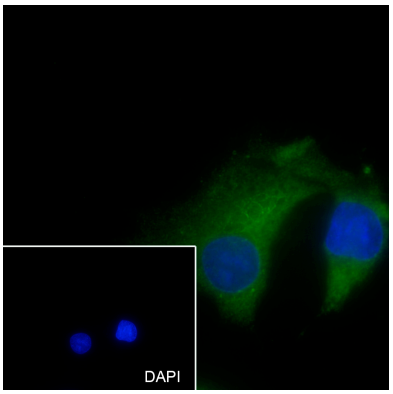
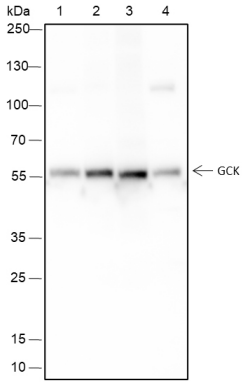
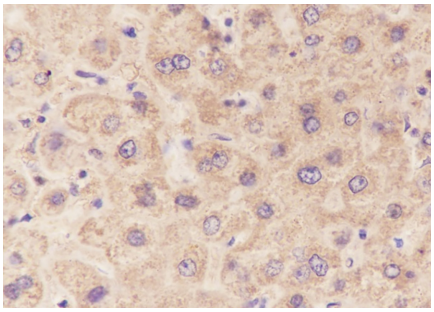
Images



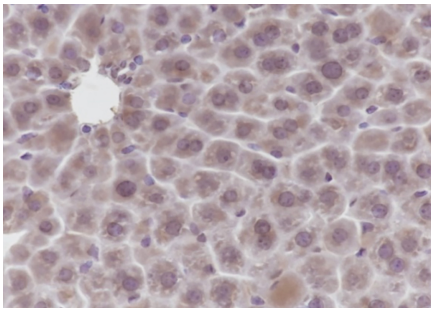
Cell line: MCF Fixative: 100% Ice-cold methanol Permeabilization: 0.1% TritonX-100 Primary ab dilution: 1:50 Primary incubation condition: 4°C overnight Secondary ab: Goat Anti-Mouse IgG Nuclear counter stain: DAPI (Blue) Comment: Color green is the positive signal for AP94567



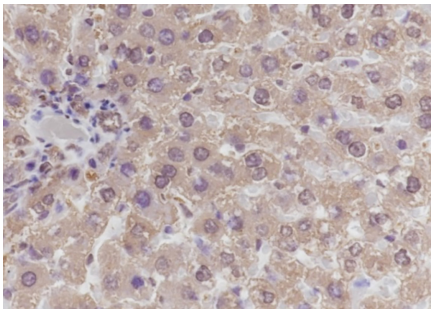
Blocking buffer: 5% NFDM/TBST Primary ab dilution: 1:1000 Primary ab incubation condition: 2 hours at room temperature Secondary ab: Goat Anti-Mouse IgG H&L (HRP) Lysate: 1: HepG2, 2: Mouse liver, 3: Rat liver, 4: PC-3 Protein loading quantity: 20 µg Exposure time: 3 s Predicted MW: 52 kDa Observed MW: 52 kDa



Tissue: Human liver Section type: Formalin fixed & Paraffin -embedded section Retrieval method: High temperature and high pressure Retrieval buffer: Tris/EDTA buffer, pH 9.0 Primary ab dilution: 1:100 Primary ab incubation condition: 1 hour at room temperature Secondary ab: SP Kit(Mouse)(sp-0024) Counter stain: Hematoxylin (Blue) Comment: Color brown is the positive signal for AP94567



Tissue: Mouse liver Section type: Formalin fixed & Paraffin -embedded section Retrieval method: High temperature and high pressure Retrieval buffer: Tris/EDTA buffer, pH 9.0 Primary ab dilution: 1:100 Primary ab incubation condition: 1 hour at room temperature Secondary ab: SP Kit(Mouse)(sp-0024) Counter stain: Hematoxylin (Blue) Comment: Color brown is the positive signal for AP94567



Tissue: Rat liver Section type: Formalin fixed & Paraffin -embedded section Retrieval method: High temperature and high pressure Retrieval buffer: Tris/EDTA buffer, pH 9.0 Primary ab dilution: 1:100 Primary ab incubation condition: 1 hour at room temperature Secondary ab: SP Kit(Mouse)(sp-0024) Counter stain: Hematoxylin (Blue) Comment: Color brown is the positive signal for AP94567