BioVision

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For research use only

Glucokinase (GCK), Rabbit pAb

ALTERNATE NAMES: Hexokinase D; Hexokinase type IV; HK IV; HK4; Glucokinase.

CATALOG #: 3153-100

AMOUNT: 100 µg

HOST(ISOTYPE): Rabbit (Ig)

IMMUNOGEN: KLH conjugated synthetic peptide selected from the N-terminal region of human GCK.

SPECIES REACTIVITY: Human, Mouse

STORAGE CONDITIONS: Maintain refrigerated at 2-8°C for up to 6 months or -20°C for long term storage.

FORMULATION: Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, eluted with high and low pH buffers and neutralized immediately, followed by dialysis against PBS.

BACKGROUND DESCRIPTION:
Hexokinases phosphorylate glucose to produce glucose-6-phosphate, thus committing glucose to the glycolytic pathway. Alternative splicing of the gene for GCK 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 the gene have been associated with non-insulin dependent diabetes mellitus (NIDDM), also called maturity onset diabetes of the young, type 2 (MODY2); mutations have also been associated with persistent hyperinsulinemic hypoglycemia of infancy (PHHI).

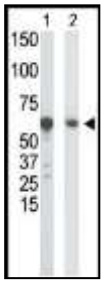
SPECIFICITY: The antibody detects a ~ 52 kDa band, corresponding to the expected molecular mass of GCK on immunoblots.

APPLICATION: The antibody can be used for ELISA (1:1000), Western blotting (1:100 – 1:500), Immunohistochemistry (1:50 – 1:100), Immunofluorescence (1:10 – 1:50) and Flow cytometry.

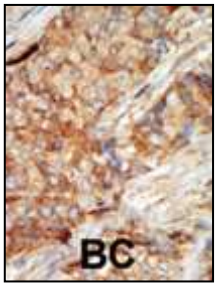
BACKGROUND REFERENCES:

1. Gloyn, A.L., et al., Diabetes 52(9):2433-2440 (2003).
2. Pruhova, S., et al., Diabetologia 46(2):291-295 (2003).
3. Rizzo, M.A., et al., J. Biol. Chem. 277(37):34168-34175 (2002).
4. Cao, H., et al., Hum. Mutat. 20(6):478-479 (2002).
5. Barrio, R., et al., J. Clin. Endocrinol. Metab. 87(6):2532-2539 (2002).

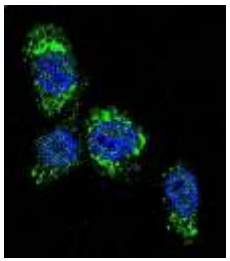
FOR RESEARCH USE ONLY! Not to be used on humans.



Western blot analysis of pAb (Cat. #3153-100) to detect GCK in HepG2 cell lysate (Lane 1) and mouse liver tissue lysate (Lane 2).



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma



Confocal immunofluorescent analysis of GCK Antibody (N-term) with HepG2 cell followed by Alexa Fluor 488-conjugated goat anti-rabbit lgG (green). DAPI was used to stain the cell nuclear (blue).

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- Mitochondrial Apoptosis Kits & Reagents
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- Apoptosis Inducers and Set
- Apoptosis siRNA Vectors

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- Mitochondria/Cytosol Fractionation Kit
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- Mammalian Cell Extraction Kit
- FractionPREP Fractionation System

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