


Product datasheet

Anti-Glucokinase antibody ab88056

3 Images

Overview

Product name	Anti-Glucokinase antibody
Description	Rabbit polyclonal to Glucokinase
Host species	Rabbit
Tested applications	Suitable for: ICC/IF, WB
Species reactivity	Reacts with: Mouse, Human Predicted to work with: Rat, Rabbit, Horse, Chicken, Cow, Non human primates 
Immunogen	Synthetic peptide corresponding to Human Glucokinase aa 1-100 conjugated to Keyhole Limpet Haemocyanin (KLH). Database link: P35557 (Peptide available as ab101298)
Positive control	This antibody gave a positive signal in human and mouse liver tissue lysates.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.02% Sodium Azide Constituents: 1% BSA, PBS, pH 7.4
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab88056** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use a concentration of 5 µg/ml.
WB		Use a concentration of 1 µg/ml. Detects a band of approximately 52 kDa (predicted molecular weight: 52 kDa).

Target

Function

Catalyzes the initial step in utilization of glucose by the beta-cell and liver at physiological glucose concentration. Glucokinase has a high Km for glucose, and so it is effective only when glucose is abundant. The role of GCK is to provide G6P for the synthesis of glycogen. Pancreatic glucokinase plays an important role in modulating insulin secretion. Hepatic glucokinase helps to facilitate the uptake and conversion of glucose by acting as an insulin-sensitive determinant of hepatic glucose usage.

Tissue specificity

Isoform 1 is expressed in pancreas. Isoform 2 and isoform 3 is expressed in liver.

Involvement in disease

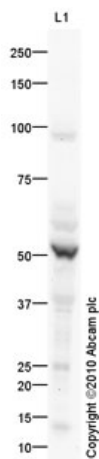
Defects in GCK are the cause of maturity-onset diabetes of the young type 2 (MODY2) [MIM:125851]; also shortened MODY-2. MODY is a form of diabetes that is characterized by an autosomal dominant mode of inheritance, onset in childhood or early adulthood (usually before 25 years of age), a primary defect 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.

Sequence similarities

Belongs to the hexokinase family.

Images



Western blot - Anti-Glucokinase antibody (ab88056)

Anti-Glucokinase antibody (ab88056) at 1 $\mu\text{g/ml}$ + Human liver tissue lysate - total protein (ab29889) at 10 $\mu\text{g/ml}$

Secondary

Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

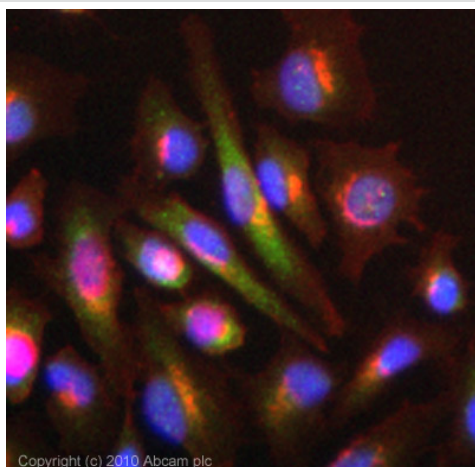
Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 52 kDa

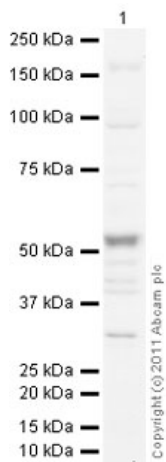
Observed band size: 52 kDa

Exposure time: 2 minutes



Immunocytochemistry/ Immunofluorescence - Anti-Glucokinase antibody (ab88056)

ICC/IF image of ab88056 stained HeLa cells. The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab88056, 5 $\mu\text{g/ml}$) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43 μM . This antibody also gave a positive result in 4% PFA fixed (10 min) MCF7 cells at 5 $\mu\text{g/ml}$.



Western blot - Anti-Glucokinase antibody (ab88056)

Anti-Glucokinase antibody (ab88056) at 1 µg/ml + Liver (Mouse) Tissue Lysate at 10 µg

Secondary

Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 52 kDa

Observed band size: 52 kDa

Exposure time: 8 minutes

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