

**Glucokinase Antibody**  
**Rabbit mAb**  
**Catalog # AP92422****Specification****Glucokinase Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P35557</a>
Clonality	Monoclonal
<b>Other Names</b>	
GCK; GK; GLK; Glucokinase; HHF3; HK IV; HK4; HKIV; HXKP; LGLK; MODY2;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	52191 Da

**Glucokinase Antibody - Additional Information**

Dilution	WB~~1:1000
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Glucokinase
Description	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.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

**Glucokinase Antibody - Protein Information**

**Name** GCK {ECO:0000303|PubMed:17573900, ECO:0000312|HGNC:HGNC:4195}

**Function**

Catalyzes the phosphorylation of hexose, such as D-glucose, D-fructose and D-mannose, to hexose 6-phosphate (D-glucose 6-phosphate, D-fructose 6-phosphate and D-mannose 6-phosphate, respectively) (PubMed:<a href="http://www.uniprot.org/citations/11916951" target="\_blank">11916951</a>, PubMed:<a href="http://www.uniprot.org/citations/15277402" target="\_blank">15277402</a>, PubMed:<a href="http://www.uniprot.org/citations/17082186" target="\_blank">17082186</a>, PubMed:<a href="http://www.uniprot.org/citations/18322640" target="\_blank">18322640</a>, PubMed:<a href="http://www.uniprot.org/citations/19146401" target="\_blank">19146401</a>, PubMed:<a href="http://www.uniprot.org/citations/25015100" target="\_blank">25015100</a>, PubMed:<a href="http://www.uniprot.org/citations/7742312" target="\_blank">7742312</a>)

target="\_blank">7742312</a>, PubMed:<a href="http://www.uniprot.org/citations/8325892" target="\_blank">8325892</a>). Compared to other hexokinases, has a weak affinity for D-glucose, and is effective only when glucose is abundant (By similarity). Mainly expressed in pancreatic beta cells and the liver and constitutes a rate-limiting step in glucose metabolism in these tissues (PubMed:<a href="http://www.uniprot.org/citations/11916951" target="\_blank">11916951</a>, PubMed:<a href="http://www.uniprot.org/citations/15277402" target="\_blank">15277402</a>, PubMed:<a href="http://www.uniprot.org/citations/18322640" target="\_blank">18322640</a>, PubMed:<a href="http://www.uniprot.org/citations/25015100" target="\_blank">25015100</a>, PubMed:<a href="http://www.uniprot.org/citations/8325892" target="\_blank">8325892</a>). Since insulin secretion parallels glucose metabolism and the low glucose affinity of GCK ensures that it can change its enzymatic activity within the physiological range of glucose concentrations, GCK acts as a glucose sensor in the pancreatic beta cell (By similarity). In pancreas, plays an important role in modulating insulin secretion (By similarity). In liver, helps to facilitate the uptake and conversion of glucose by acting as an insulin-sensitive determinant of hepatic glucose usage (By similarity). Required to provide D-glucose 6-phosphate for the synthesis of glycogen (PubMed:<a href="http://www.uniprot.org/citations/8878425" target="\_blank">8878425</a>). Mediates the initial step of glycolysis by catalyzing phosphorylation of D-glucose to D-glucose 6-phosphate (PubMed:<a href="http://www.uniprot.org/citations/7742312" target="\_blank">7742312</a>).

#### **Cellular Location**

Cytoplasm. Nucleus. Mitochondrion {ECO:0000250|UniProtKB:P17712}. Note=Under low glucose concentrations, GCK associates with GCKR and the inactive complex is recruited to the hepatocyte nucleus.

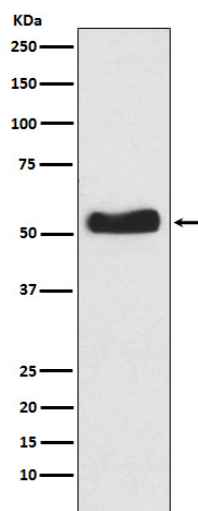
#### **Glucokinase Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

#### **Glucokinase Antibody - Images**





Western blot analysis of Glucokinase expression in BxPC-3 cell lysate.