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# Glucokinase Rabbit mAb

Catalog # AP77033

## Product Information

| | |
|---|---|
| **Application** | WB |
| **Primary Accession** | P35557 |
| **Reactivity** | Human |
| **Host** | Rabbit |
| **Clonality** | Monoclonal Antibody |
| **Isotype** | IgG |
| **Conjugate** | Unconjugated |
| **Immunogen** | A synthesized peptide derived from human Glucokinase |
| **Purification** | Affinity Purified |
| **Calculated MW** | 52191 |

## Additional Information

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|---|---|
| **Gene ID** | 2645 |
| **Other Names** | GCK |
| **Dilution** | WB~~1/500-1/1000 |
| **Format** | Liquid in 10mM PBS, pH 7.4, 150mM sodium chloride, 0.05% BSA, 0.02% sodium azide and 50% glycerol. |
| **Storage** | Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles. |

## Protein Information

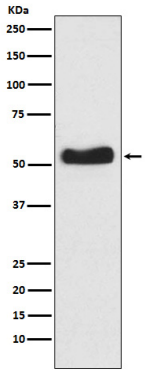
| | |
|---|---|
| **Name** | GCK {ECO:0000303\|PubMed:17573900, ECO:0000312\|HGNC:HGNC:4195} |
| **Function** | Catalyzes the phosphorylation of hexose, such as D-glucose, D-fructose and D-mannose, to hexose 6-phosphate (D-glucose 6-phosphate, D-fructose 6-phosphate and D-mannose 6-phosphate, respectively) (PubMed:11916951, PubMed:15277402, PubMed:17082186, PubMed:18322640, PubMed:19146401, PubMed:25015100, PubMed:7742312, PubMed:8325892). 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:11916951, PubMed:15277402, PubMed:18322640, PubMed:25015100, PubMed:8325892). 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:8878425). Mediates the initial step of glycolysis by catalyzing phosphorylation of D-glucose to D-glucose 6-phosphate (PubMed:7742312).

**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.

## Images




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