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Anti-Glucokinase Rabbit Monoclonal Antibody

Catalog # ABO15841

Product Information

Application	WB
Primary Accession	P35557
Host	Rabbit
Isotype	IgG
Reactivity	Human
Clonality	Monoclonal
Format	Liquid
Description	Anti-Glucokinase Rabbit Monoclonal Antibody . Tested in WB application. This antibody reacts with Human.

Additional Information

Gene ID	2645
Other Names	Hexokinase-4, HK4, 2.7.1.1, Glucokinase, Hexokinase type IV, GCK {ECO:0000303|PubMed:17573900, ECO:0000312|HGNC:HGNC:4195}
Calculated MW	52191
Application Details	WB 1:500-1:2000
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: 24G18
Immunogen	A synthesized peptide derived from human Glucokinase
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

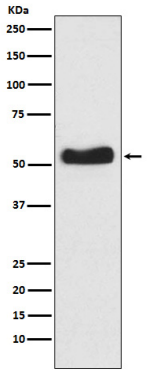
Name	GCK {ECO:0000303|PubMed:17573900, ECO:0000312|HGNC:HGNC:4195}
Function	Catalyzes the phosphorylation of hexose, such as D-glucose, D-fructose and D-mannose, to hexose 6-phosphate (D-glucose 6-phosphate, D-fructose 6-phosphate and D-mannose 6-phosphate, respectively) (PubMed:11916951, PubMed:15277402, 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



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

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