

Recombinant Human GCK Protein (M1-Q465), Tag Free

Cat. No. GCK-0260H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human GCK(M1-Q465 end) Protein was expressed in E. coli.
Species	Human
Source	E.coli
ProteinLength	M1-Q465
Description	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). Compared to other hexokinases, has a weak affinity for D-glucose, and is effective only when glucose is abundant. Mainly expressed in pancreatic beta cells and the liver and constitutes a rate-limiting step in glucose metabolism in these tissues. 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. In pancreas, plays an important role in modulating insulin secretion. In liver, helps to facilitate the uptake and conversion of glucose by acting as an insulin-sensitive determinant of hepatic glucose usage. Required to provide D-glucose 6-phosphate for the synthesis of glycogen. Mediates the initial step of glycolysis by catalyzing phosphorylation of D-glucose to D-glucose 6-phosphate.
Form	Liquid

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Endotoxin	< 0.01 EU per µg of the protein
Purity	90%
Stability	Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade.
Storage	Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Storage Buffer	Supplied as sterile 50 mM Tris-HCl (pH7.5), 200 mM NaCl, 20% glycerol
Shipping	It is shipped out with blue ice.

GENE INFORMATION

Gene Name	GCK glucokinase (hexokinase 4) [Homo sapiens (human)]
Official Symbol	GCK
Synonyms	GCK; glucokinase (hexokinase 4); maturity onset diabetes of the young 2, MODY2; glucokinase; HK4; HK IV; hexokinase-4; hexokinase-D; hexokinase type IV; hexokinase D, pancreatic isozyme; ATP:D-hexose 6-phosphotransferase; GK; GLK; HHF3; HKIV; HXKP; LGLK; MODY2; FGQTL3;
Gene ID	2645
mRNA Refseq	NM_000162
Protein Refseq	NP_000153

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MIM	138079
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UniProt ID	P35557
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