

# Recombinant Human GCK Protein, Myc/DDK-tagged, C13 and N15-labeled

**Cat. No.** GCK-2089H    **Lot. No.** (See product label)

## SPECIFICATION

<b>Product Overview</b>	GCK MS Standard C13 and N15-labeled recombinant protein (NP_277043) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
<b>Species</b>	Human
<b>Source</b>	HEK293
<b>Description</b>	This gene encodes a member of the hexokinase family of proteins. Hexokinases phosphorylate glucose to produce glucose-6-phosphate, the first step in most glucose metabolism pathways. In contrast to other forms of hexokinase, this enzyme is not inhibited by its product glucose-6-phosphate but remains active while glucose is abundant. The use of multiple promoters and alternative splicing of this gene result in distinct protein isoforms that exhibit tissue-specific expression in the pancreas and liver. In the pancreas, this enzyme plays a role in glucose-stimulated insulin secretion, while in the liver, this enzyme is important in glucose uptake and conversion to glycogen. Mutations in this gene that alter enzyme activity have been associated with multiple types of diabetes and hyperinsulinemic hypoglycemia.
<b>Molecular Mass</b>	51.9 kDa
<b>AA Sequence</b>	MPRPRSQLPQPNSQVEQILAEFQLQEEDLKKVMRRMQKEMDRGLRLETHEEASVK MLPTYVRSTPEGSEVGDFLSLDLGGTNFRVMLVKVGEEGEQWSVKTKHQMYSIP EDAMTGTAEMLFDYISECISDFLDKHQMKHKKLPLGFTFSFPVRHEDIDKGILLNWTK

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GFKASGAEGNNVVGLLRDAIKRRGDFEMDVVAMVNDTVATMISCYYEDHQCEVGMIVGTGCNACYMEEMQNVELVEGDEGRMCVNTEWGAFGDSGELDEFLELYDRLVDESSANPGQQLYEKLIIGGKYMGEVLVRLVLLRLVDENLLFHGEASEQLRTRGAFETRFSQVESDTGDRKQIYNILSTLGLRPSTTDCDIVRRACESVSTRAAHMCSAGLAGVINRMRESRSEDVMRITVGVDGSVYKLHPSFKERFHASVRRRLTPSCEITFIESEEGSGRGAA LVSAVACKKACMLGQTRTRPLEQKLISEEDLAANDILDYKDDDDKV

<b>Purity</b>	> 80% as determined by SDS-PAGE and Coomassie blue staining
<b>Stability</b>	Stable for 3 months from receipt of products under proper storage and handling conditions.
<b>Storage</b>	Store at -80 centigrade. Avoid repeated freeze-thaw cycles.
<b>Concentration</b>	50 µg/mL as determined by BCA
<b>Storage Buffer</b>	100 mM glycine, 25 mM Tris-HCl, pH 7.3.

## GENE INFORMATION

<b>Gene Name</b>	GCK glucokinase [ Homo sapiens (human) ]
<b>Official Symbol</b>	GCK
<b>Synonyms</b>	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; FGQL3;
<b>Gene ID</b>	2645

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mRNA Refseq [NM\\_033508](#)

Protein Refseq [NP\\_277043](#)

MIM [138079](#)

UniProt ID [P35557](#)

SDS-PAGE



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