

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

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

SPECIFICATION

Product Overview	GCK MS Standard C13 and N15-labeled recombinant protein (NP_277043) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
Species	Human
Source	HEK293
Description	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.
Molecular Mass	51.9 kDa
AA Sequence	MPRPRSQLPQPNSQVEQILAEFQLQEEDLKKVMRRMQKEMDRGLRLETHEEASVK MLPTYVRSTPEGSEVGDFLSLDLGGTNFRVMLVKVGEEGEQWSVKTKHQMYSIP EDAMTGTAEMLFDYISECISDFLDKHQMKHKKLPLGFTFSFPVRHEDIDKGILLNWTK

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

GFKASGAEGNNVGLLRDAIKRRGDFEMDVVAMVNDTVATMISCYYEDHQCEVGM
 VGTGCNACYMEEMQNVELVEGDEGRMCVNTEWGAFGDSGELDEFLLLEYDRLVDE
 SSANPGQQLYEKLIGGKYMGEVLRLVLLRLVDENLLFHGEASEQLRTRGAFETRFS
 QVESDTGDRKQIYNILSTLGLRPSTTDCDIVRRACESVSTRAAHMCSAGLAGVINRM
 RESRSEDVMRITVGVDGSVYKLHPSFKERFHASVRRLTPSCEITFIESEEGSGRGAA
 LVSAVACKKACMLGQTRTRPLEQKLISEEDLAANDILDYKDDDDKV

Purity > 80% as determined by SDS-PAGE and Coomassie blue staining

Stability Stable for 3 months from receipt of products under proper storage and handling conditions.

Storage Store at -80 centigrade. Avoid repeated freeze-thaw cycles.

Concentration 50 µg/mL as determined by BCA

Storage Buffer 100 mM glycine, 25 mM Tris-HCl, pH 7.3.

GENE INFORMATION

Gene Name GCK glucokinase [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

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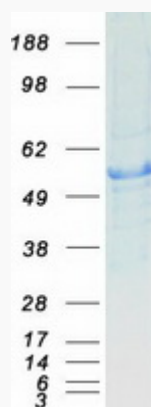
mRNA Refseq NM_033508

Protein Refseq NP_277043

MIM 138079

UniProt ID P35557

SDS-PAGE



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