

## Active Recombinant Human GCK Protein, His-tagged

**Cat. No.** GCK-005H    **Lot. No.** (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant human Hexokinase4, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
<b>Species</b>	Human
<b>Source</b>	E.coli
<b>Description</b>	Hexokinase is the first enzyme in the glycolytic pathway, catalyzing the transfer of a phosphoryl group from ATP to glucose to form glucose-6-phosphate and ADP. In mammals, four distinct enzymes-types 1 to 4 hexokinases-have been identified. The enzyme is found in most cells, but there is tissue specificity for the particular type of hexokinase. Hexokinase4 is found in the liver and pancreatic beta-cells, where it is controlled by insulin (activation) and glucagon (inhibition). In pancreatic beta-cells, type IV enzyme acts as a glucose sensor to modify insulin secretion. Hexokinase4 is commonly called 'glucokinase'.
<b>Form</b>	Liquid
<b>Bio-activity</b>	Specific activity is > 2,000 pmol/min/μg. One unit will convert 1 pmoles of D-Glucose to D-Glucose-6-phosphate per minute at pH8.0 at 37 centigrade.
<b>Molecular Mass</b>	54.3 kDa (485aa)
<b>AA Sequence</b>	MGSSHHHHHSSGLVPRGSHMLDDRARMEEAAKKEKVEQILAEFQLQEEDLKKVMR RMQKEMDRGLRLETHEEASVKMLPTYVRSTPEGSEVGDFLSLDLGGTNRVMLVK

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VGEGEEGQWSVKTQKHMYSIPEDAMTGTAEMLFDYISECISDFLDKHQMKHKKLPL  
 GFTFSFPVRHEDIDKGILLNWTGKFKASGAEGNNVGLLRDAIKRRGDFEMDVVAM  
 VNDTVATMISCYYEDHQCEVGMIVGTGCNACYMEEMQNVELVEGDEGRMCVNT  
 WGAFGDSGELDEFLLYDRLVDESSANPGQQLYEKLIKKYMGELVRLVLLRLVDE  
 NLLFHGEASEQLRTRGAFETRFVSQVESDTGDRKQIYNILSTLGLRPSTTDCDIVRRA  
 CESVSTRAAHMCSAGLAGVINRMRESRSEDVMRITVGVGDGSVYKLPSPFKERFHAS  
 VRRLLTPSCEITFIESEEGSGRGAALVSAVACKKACMLGQ

**Endotoxin** < 1.0 EU per 1µg of protein (determined by LAL method)

**Purity** > 95% by SDS-PAGE

**Notes** For research use only. This product is not intended or approved for human, diagnostics or veterin.

**Storage** Can be stored at +4 centigrade short term (1-2 weeks). For long term storage, aliquot and store at -20 or -70 centigrade.  
 Avoid repeated freezing and thawing cycles.

**Concentration** 1 mg/mL (determined by Bradford assay)

**Storage Buffer** In 20 mM Tris-HCl buffer (pH 8.0) containing 10% glycerol

## GENE INFORMATION

**Gene Name** GCK glucokinase [ Homo sapiens (human) ]

**Official Symbol** GCK

**Synonyms** Hexokinase type IV; Glucokinase; GCK; GK; GLK; HK4; HHF3; HKIV; HXKP; LGLK; MODY2; FGQL3; glucokinase; ATP:D-hexose 6-phosphotransferase; HK IV;

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glucokinase (hexokinase 4); hexokinase D, pancreatic isozyme; hexokinase type IV;  
EC 2.7.1.2

**Gene ID** 2645

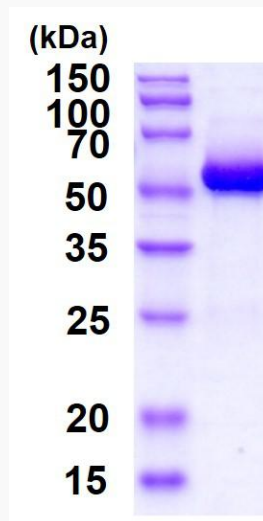
**mRNA Refseq** NM\_000162

**Protein Refseq** NP\_000153

**MIM** 138079

**UniProt ID** P35557

**SDS-PAGE**



15% SDS-PAGE (3 $\mu$ g)

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