

Bioactive

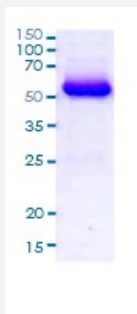
Full-Length

GCK (Human) Recombinant Protein

Catalog # P6833

Size 50 ug

Applications



15% SDS-PAGE under reducing condition and visualized by coomassie blue stain.

Specification

Product Description	Human Hexokinase 4 protein (NP_000153, 1 a.a.-465 a.a.) full length recombinant protein with His tag expressed in <i>Escherichia coli</i> .
Host	<i>Escherichia coli</i>
Theoretical MW (kDa)	54.3
Form	Liquid
Preparation Method	<i>Escherichia coli</i> expression system
Purity	> 95% by SDS-PAGE
Endotoxin Level	< 1 EU/ug
Activity	Specific activity is > 2,000 pmol/min/ug. One unit will convert 1 pmole of D-Glucose to D-Glucose-6-phosphate per minute at pH8.0 at 37°C.
Quality Control Testing	15% SDS-PAGE under reducing condition and visualized by coomassie blue stain. 15% SDS-PAGE under reducing condition and visualized by coomassie blue stain.
Recommend Usage	SDS-PAGE The optimal working dilution should be determined by the end user.

Storage Buffer	In 20 mM Tris-HCl, pH 8.0 (10% glycerol)
Storage Instruction	Store at -20°C. For long term storage store at -80°C. Aliquot to avoid repeated freezing and thawing.

Applications

- SDS-PAGE

Gene Info — GCK

Entrez GeneID	2645
Protein Accession#	P35557
Gene Name	GCK
Gene Alias	GK, GLK, HHF3, HK4, HKIV, HXKP, MODY2
Gene Description	glucokinase (hexokinase 4)
Omim ID	125851 125853 138079 602485 606176
Gene Ontology	Hyperlink
Gene Summary	Hexokinases phosphorylate glucose to produce glucose-6-phosphate, the first step in most glucose metabolism pathways. Alternative splicing of this gene results in three tissue-specific forms of glucokinase, one found in pancreatic islet beta cells and two found in liver. The protein localizes to the outer membrane of mitochondria. 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. Mutations in this gene have been associated with non-insulin dependent diabetes mellitus (NIDDM), maturity onset diabetes of the young, type 2 (MODY2) and persistent hyperinsulinemic hypoglycemia of infancy (PHHI). [provided by RefSeq]
Other Designations	ATP:D-hexose 6-phosphotransferase OTTHUMP00000024521 OTTHUMP00000159308 glucokinase hexokinase D, pancreatic isozyme

Pathway

- [Amino sugar and nucleotide sugar metabolism](#)
- [Galactose metabolism](#)
- [Glycolysis / Gluconeogenesis](#)

- [Insulin signaling pathway](#)
- [Maturity onset diabetes of the young](#)
- [Metabolic pathways](#)
- [Starch and sucrose metabolism](#)
- [Streptomycin biosynthesis](#)
- [Type II diabetes mellitus](#)

Disease

- [Alzheimer disease](#)
- [Atherosclerosis](#)
- [Birth Weight](#)
- [Calcinosis](#)
- [Cardiovascular Diseases](#)
- [Coronary Artery Disease](#)
- [Coronary Disease](#)
- [Diabetes](#)
- [Diabetes Complications](#)
- [Diabetes Mellitus](#)
- [Diabetic Nephropathies](#)
- [Disease Progression](#)
- [Disease Susceptibility](#)
- [Edema](#)
- [Fetal Growth Retardation](#)
- [Genetic Predisposition to Disease](#)
- [Glucose Intolerance](#)
- [HIV Infections](#)

- [Hyperglycemia](#)
- [Hyperinsulinism](#)
- [Hypertension](#)
- [Hypoglycemia](#)
- [Insulin Resistance](#)
- [Kidney Failure](#)
- [Metabolic Syndrome X](#)
- [Neoplasms](#)
- [Obesity](#)
- [Osteoporosis](#)
- [Overweight](#)
- [Persistent Hyperinsulinemia Hypoglycemia of Infancy](#)
- [Postoperative Complications](#)
- [Pregnancy Complications](#)
- [Pregnancy in Diabetics](#)
- [Sudden Infant Death](#)