

## GCK Human

**Description:** Glucokinase Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain fused to His tag at the N-terminal encoding the sequence of 485 amino acids and having a molecular mass of 54.3 kDa. HK4 is purified by proprietary chromatographic techniques.

**Catalog #:** PKPS-243

For research use only.

**Synonyms:** Glucokinase, EC 2.7.1.2, Hexokinase-4, Hexokinase type IV, HK IV, HK4, Hexokinase-D, GCK, GK, GLK, HHF3, HKIV, HXKP, MODY2.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile filtered colorless solution.

**Amino Acid Sequence:** MGSSHHHHHH SSGLVPRGSH MLDDRAMEA AKKEKVEQIL  
AEFQLQEEDL KVMRRMQKE MDRGLRLETH EEASVKMLPT YVRSTPEGSE VGDFLSLDLG  
GTNFRVMLVK VGEGEEGQWS VKTKHQMYSI PEDAMTGTAELMFDYISECI SDFLDKHQMK  
HKKLPLGFTF SFPVRHEDID KGILLNWTGK FKASGAEGNN VVGLLRDAIK RRGDFEMDVV  
AMVNDTVATM IS

**Purity:** Greater than 95.0% as determined by SDS-PAGE.

**Formulation:**

The protein (1mg/ml) contains 20mM Tris-HCl pH-8.0 and 10% glycerol.

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Introduction:**

Hexokinases phosphorylate glucose to produce glucose-6-phosphate, thus committing glucose to the glycolytic pathway. Alternative splicing of Glucokinase 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, HK4 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).

**Storage:**

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please avoid freeze-thaw cycles.

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