

32-6979: GCK Human, Active

Application :	Functional Assay
Alternative Name :	Glucokinase, Glucokinase (Hexokinase 4), Hexokinase Type IV, HK IV, HK4, Maturity Onset Diabetes of The Young 2, ATP:D-Hexose 6-Phosphotransferase, Hexokinase D, Pancreatic Isozyme, Hexokinase-4, Hexokinase-D, Hexokinase 4.

Description

Source: Escherichia Coli.

Sterile filtered colorless solution.

GCK is an enzyme that expedite the formation of glucose-6-phosphate for glucose by phosphorylation. Humans and other vertebrates have GCK in the cells of the pancreas and liver. In both organs, the enzyme has an important role in carbohydrate metabolism regulation by sensing sugar levels and acting according to the change in glucose levels, that can rise after a meal or fall during fasting. Mutations in the gene that codes for this enzyme can cause hypoglycemia or diabetes.

GCK Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 485 amino acids (1-465 a.a) and having a molecular mass of 54.3kDa. GCK is fused to a 20 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

Product Info

Amount :	1 µg / 5 µg
Purification :	Greater than 95% as determined by SDS-PAGE.
Content :	GCK protein solution (1mg/ml) contains 20 mM Tris-HCl buffer (pH 8.0) and 10% glycerol.
Storage condition :	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). Avoid multiple freeze-thaw cycles.
Amino Acid :	MGSSHHHHHH SSGLVPRGSH MLDDRARMEA AKKEKVEQIL AEFQLQEEDL KKVMRMQKE MDRGLRLETH EEASVKMLPT YVRSTPEGSE VGDFLSLDLG GTNFRVMLVK VGEGEEGQWS VKTKHQMYSI PEDAMTGTAELMFDYISECI SDFLDKHQMK HKKLPLGFTF SFPVRHEDID KGILLNWTKG FKASGAEGNN VGLLRDAIK RRGDFEMDVV AMVNDTVATM ISCYEDHQC EVGMIVGTGC NACYMEEMQN VELVEGDEGR MCVNTEWGAF GDSGELDEFL LEYDRLVDES SANPGQQLYE KLIGGKYMGE LVRLVLLRLV DENLLFHGEA SEQLRTRGAF ETRFVSQVES DTGDRKQIYN ILSTLGLRPS TTDCDIVRRA CESVSTRAAH MCSAGLAGVI NRMRESRSED VMRITVGVDG SVYKLHPSFK ERFHASVRRL TPSCEITFIE SEEGSGRGAA LVSAVACKKA CMLGQ.

Application Note

Specific activity is > 2,000 pmol/min/ug. One unit will convert 1 pmoles of D-Glucose to D-Glucose-6-phosphate per minute at pH8.0 at 37C.