



GCK blocking peptide (DAG-P1635)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Antigen Description	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, Apr 2009]
Specificity	Isoform 1 is expressed in pancreas. Isoform 2 and isoform 3 is expressed in liver.
Conjugate	Unconjugated
Applications	BL
Sequence Similarities	Belongs to the hexokinase family.
Format	Liquid
Preservative	None
Storage	Store at +4°C short term (1-2 weeks). Aliquot and store at -20°C long term. Avoid repeated freeze / thaw cycles.

GENE INFORMATION

Gene Name	GCK glucokinase (hexokinase 4) [Homo sapiens (human)]
Official Symbol	GCK
Synonyms	GCK; glucokinase (hexokinase 4); GK; GLK; HK4; HHF3; HKIV; HXKP; LGLK; MODY2;

FGQTL3; glucokinase; HK IV; hexokinase-4; hexokinase-D; hexokinase type IV; hexokinase D, pancreatic isozyme; ATP:D-hexose 6-phosphotransferase;

Entrez Gene ID	2645
mRNA Refseq	NM_000162.3
Protein Refseq	NP_000153.1
UniProt ID	P35557
Chromosome Location	7p15.3-p15.1
Pathway	Amino sugar and nucleotide sugar metabolism, organism-specific biosystem; Amino sugar and nucleotide sugar metabolism, conserved biosystem; Butirosin and neomycin biosynthesis, organism-specific biosystem; Butirosin and neomycin biosynthesis, conserved biosystem; Carbon metabolism, organism-specific biosystem; Carbon metabolism, conserved biosystem; Developmental Biology, organism-specific biosystem; FOXA2 and FOXA3 transcription factor networks, organism-specific biosystem; GDP-glucose biosynth
Function	ADP binding; ATP binding; NOT fructokinase activity; glucokinase activity; glucose binding; magnesium ion binding; NOT mannokinase activity; protein binding; protein phosphatase binding;