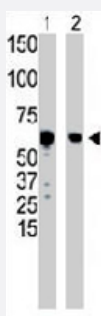


GCK polyclonal antibody

Catalog # PAB3531

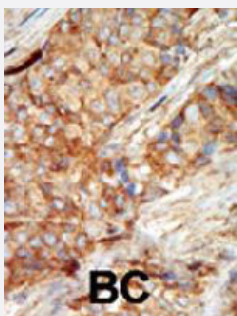
Size 200 uL

Applications



Western Blot

The GCK polyclonal antibody (Cat # PAB3531) is used in Western blot to detect GCK in HepG2 cell lysate (Lane 1) and mouse liver tissue lysate (Lane 2) .



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Formalin-fixed and paraffin-embedded human cancer tissue reacted with GCK polyclonal antibody (Cat # PAB3531) , which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry ; clinical relevance has not been evaluated. BC = breast carcinoma.

Specification

Product Description	Rabbit polyclonal antibody raised against synthetic peptide of GCK.
Immunogen	A synthetic peptide (conjugated with KLH) corresponding to N-terminus of human GCK.
Host	Rabbit
Reactivity	Human, Mouse
Form	Liquid
Purification	Protein G purification

Recommend Usage	Immunofluorescence (1:10-50) Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) (1:50-100) Western Blot (1:1000) The optimal working dilution should be determined by the end user.
Storage Buffer	In PBS (0.09% sodium azide)
Storage Instruction	Store at 4°C. For long term storage store at -20°C. Aliquot to avoid repeated freezing and thawing.
Note	This product contains sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.

Applications

- Western Blot

The GCK polyclonal antibody (Cat # PAB3531) is used in Western blot to detect GCK in HepG2 cell lysate (Lane 1) and mouse liver tissue lysate (Lane 2) .

- Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)

Formalin-fixed and paraffin-embedded human cancer tissue reacted with GCK polyclonal antibody (Cat # PAB3531) , which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry ; clinical relevance has not been evaluated. BC = breast carcinoma.

- Immunofluorescence

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

Publication Reference

- [Insights into the biochemical and genetic basis of glucokinase activation from naturally occurring hypoglycemia mutations.](#)

Gloyn AL, Noordam K, Willemsen MA, Ellard S, Lam WW, Campbell IW, Midgley P, Shiota C, Buettger C, Magnuson MA, Matschinsky FM, Hattersley AT.

Diabetes 2003 Sep; 52(9):2433.

- [Genetic epidemiology of MODY in the Czech republic: new mutations in the MODY genes HNF-4alpha, GCK and HNF-1alpha.](#)

Pruhova S, Ek J, Lebl J, Sumnik Z, Saudek F, Andel M, Pedersen O, Hansen T.

Diabetologia 2003 Feb; 46(2):291.

- [A functional link between glucokinase binding to insulin granules and conformational alterations in response to glucose and insulin.](#)

Rizzo MA, Magnuson MA, Drain PF, Piston DW.

The Journal of Biological Chemistry 2002 Sep; 277(37):34168.

Application: IF, WB, Mouse, β TC3 cells

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](#)