BACKGROUND

Glucokinase (also designated hexokinase IV, HXXIV or GCK) plays a key role in the regulation of glucose-induced Insulin secretion. GCK is expressed in pancreatic β cells where it functions as the major glucose sensor of the body, determining the “set point” for Insulin secretion. GCK is also expressed in the liver, where it catalyzes the first committed step in the disposal of glucose. Phosphorylation of glucose by glucokinase appears to be the rate-limiting step for glucose catabolism. A lack of glucokinase activity leads to reduced Insulin secretion and hyperglycemia, and has been implicated as a cause for maturity onset diabetes of the youth (MODY). In fact, heterozygous point mutations in the gene encoding GCK have been detected in individuals suffering from MODY.

CHROMOSOMAL LOCATION

Genetic locus: GCK (human) mapping to 7p13; Gck (mouse) mapping to 11 A1.

SOURCE

GCK (G-6) is a mouse monoclonal antibody raised against amino acids 318-405 of GCK of human origin.

PRODUCT

Each vial contains 200 µg IgG\textsubscript{1} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GCK (G-6) is available conjugated to agarose (sc-17819 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-17819 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-17819 PE), fluorescein (sc-17819 FITC), Alexa Fluor\textsuperscript{®} 488 (sc-17819 AF488), Alexa Fluor\textsuperscript{®} 546 (sc-17819 AF546), Alexa Fluor\textsuperscript{®} 594 (sc-17819 AF594) or Alexa Fluor\textsuperscript{®} 647 (sc-17819 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor\textsuperscript{®} 680 (sc-17819 AF680) or Alexa Fluor\textsuperscript{®} 790 (sc-17819 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

GCK (G-6) is recommended for detection of GCK of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).


Molecular Weight of GCK: 50 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA

SELECT PRODUCT CITATIONS


RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.