

# GCK (m): 293T Lysate: sc-125374

## BACKGROUND

Glucokinase (also designated hexokinase IV, HKIV or GCK) plays a key role in the regulation of glucose-induced Insulin secretion. GCK is expressed in pancreatic  $\beta$  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 GCK appears to be the rate-limiting step for glucose catabolism. A lack of GCK 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.

## REFERENCES

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4. Liang, Y., et al. 1995. Variable effects of maturity-onset-diabetes-of-youth (MODY)-associated glucokinase mutations on substrate interactions and stability of the enzyme. *Biochem. J.* 309: 167-173.
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7. Heimberg, H., et al. 1996. The glucose sensor protein glucokinase is expressed in glucagon-producing  $\alpha$ -cells. *Proc. Natl. Acad. Sci. USA* 93: 7036-7041.
8. Ferre, T., et al. 1996. Correction of diabetic alterations by glucokinase. *Proc. Natl. Acad. Sci. USA* 93: 7225-7230.

## CHROMOSOMAL LOCATION

Genetic locus: Gck (mouse) mapping to 11 A1.

## PRODUCT

GCK (m): 293T Lysate represents a lysate of mouse GCK transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

GCK (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive GCK antibodies. Recommended use: 10-20  $\mu$ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## RESEARCH USE

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