

GK1 (m): 293T Lysate: sc-120491

BACKGROUND

As the central structural component of the major classes of biological lipids, triglycerides and phosphatidyl phospholipids, glycerol is an essential intermediate in carbohydrate and lipid metabolism. Glycerol kinases (GKs) function to catalyze the transfer of a phosphate group from ATP to glycerol, thereby forming glycerol phosphate. This intermediate can then be converted to dihydroxyacetone phosphate (DHAP), which is utilized in either glycolysis or gluconeogenesis. Mutations in the genes encoding GK family members can result in glycerol kinase deficiency, which is characterized by hyperglycemia, psychomotor retardation and osteoporosis. GK1 is a 559 amino acid mitochondrial peripheral membrane protein that belongs to the FGGY kinase family and is a key enzyme involved in the regulation of glycerol uptake and metabolism. GK1 shows high expression in kidney, testis and liver and exists as three isoforms, which are produced as a result of alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Gyk (mouse) mapping to X C1.

RESEARCH USE

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

PRODUCT

GK1 (m): 293T Lysate represents a lysate of mouse GK1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

GK1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive GK1 antibodies. Recommended use: 10-20 µl per lane.

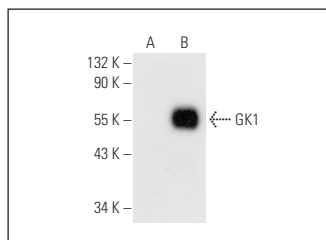
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

GK1 (E-4): sc-398385 is recommended as a positive control antibody for Western Blot analysis of enhanced human GK expression in GK transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



GK1 (E-4): sc-398385. Western blot analysis of GK1 expression in non-transfected: sc-117752 (A) and mouse GK1 transfected: sc-120491 (B) 293T whole cell lysates.

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 for detailed protocols and support products.