

GK1 (N-11): sc-161649

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.

CHROMOSOMAL LOCATION

Genetic locus: GK (human) mapping to Xp21.2; Gyk (mouse) mapping to X C1.

SOURCE

GK1 (N-11) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of GK1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-161649 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

GK1 (N-11) is recommended for detection of GK1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with GK2 or GK5.

GK1 (N-11) is also recommended for detection of GK1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GK1 siRNA (h): sc-91167, GK1 siRNA (m): sc-145410, GK1 shRNA Plasmid (h): sc-91167-SH, GK1 shRNA Plasmid (m): sc-145410-SH, GK1 shRNA (h) Lentiviral Particles: sc-91167-V and GK1 shRNA (m) Lentiviral Particles: sc-145410-V.

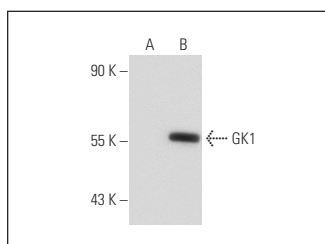
Molecular Weight of GK1: 61 kDa.

Positive Controls: GK1 (m): 293T Lysate: sc-120491.

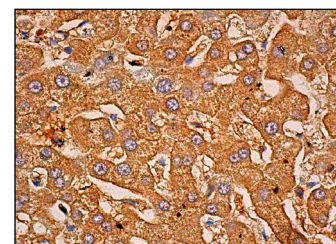
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



GK1 (N-11): sc-161649. Western blot analysis of GK1 expression in non-transfected: sc-117752 (A) and mouse GK1 transfected: sc-120491 (B) 293T whole cell lysates.



GK1 (N-11): sc-161649. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes.

STORAGE

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

PROTOCOLS

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



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Satisfaction
Guaranteed

Try **GK1 (E-4): sc-398385**, our highly recommended monoclonal alternative to GK1 (N-11).