

DGUOK (M-108): sc-98808

BACKGROUND

DGUOK (deoxyguanosine kinase), also known as DGK, is a 277 amino acid protein that localizes to mitochondria and exists as multiple alternatively spliced isoforms. Functioning as a homodimer and highly expressed in a variety of tissues, including liver, muscle and brain, DGUOK uses ATP to catalyze the conversion of deoxyguanosine to dGMP. Via its catalytic activity, DGUOK is essential for the phosphorylation of purine deoxyribonucleosides in the mitochondrial matrix and is an important antiviral and chemotherapeutic tool. Defects in the gene encoding DGUOK are the cause of hepatocerebral mitochondrial DNA depletion syndrome (MDS), a group of disorders that result in reduced mtDNA (mitochondrial DNA) copy number and are characterized by liver failure and neurologic abnormalities.

REFERENCES

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- Taanman, J.W., et al. 2003. Mitochondrial DNA depletion can be prevented by dGMP and dAMP supplementation in a resting culture of deoxyguanosine kinase-deficient fibroblasts. *Hum. Mol. Genet.* 12: 1839-1845.
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CHROMOSOMAL LOCATION

Genetic locus: Dguok (mouse) mapping to 6 C3.

SOURCE

DGUOK (M-108) is a rabbit polyclonal antibody raised against amino acids 170-277 mapping at the C-terminus of DGUOK of mouse origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

DGUOK (M-108) is recommended for detection of DGUOK of mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for DGUOK siRNA (m): sc-77140, DGUOK shRNA Plasmid (m): sc-77140-SH and DGUOK shRNA (m) Lentiviral Particles: sc-77140-V.

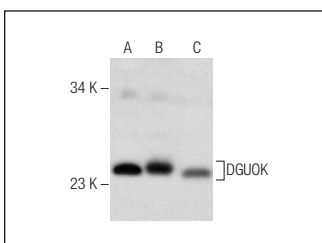
Molecular Weight of DGUOK: 28 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, NIH/3T3 whole cell lysate: sc-2210 or NRK whole cell lysate: sc-364197.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



DGUOK (M-108): sc-98808. Western blot analysis of DGUOK expression in KNRK (A), NRK (B) and NIH/3T3 (C) whole cell lysates.

STORAGE

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

MONOS
Satisfaction
Guaranteed

Try **DGUOK (H-3): sc-376267** or **DGUOK (G-2): sc-376256**, our highly recommended monoclonal alternatives to DGUOK (M-108).