

DGUOK (G-14): sc-82852

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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CHROMOSOMAL LOCATION

Genetic locus: DGUOK (human) mapping to 2p13.1; Dguok (mouse) mapping to 6 C3.

SOURCE

DGUOK (G-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DGUOK of human origin.

RESEARCH USE

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

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-82852 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

DGUOK (G-14) is recommended for detection of DGUOK of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with isoforms DGUOK2, DGUOK3 or DGUOK4.

DGUOK (G-14) is also recommended for detection of DGUOK in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for DGUOK siRNA (h): sc-77139, DGUOK siRNA (m): sc-77140, DGUOK shRNA Plasmid (h): sc-77139-SH, DGUOK shRNA Plasmid (m): sc-77140-SH, DGUOK shRNA (h) Lentiviral Particles: sc-77139-V and DGUOK shRNA (m) Lentiviral Particles: sc-77140-V.

Molecular Weight of DGUOK: 28 kDa.

Positive Controls: mouse kidney extract: sc-2255.

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) 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.

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.



Try **DGUOK (H-3): sc-376267** or **DGUOK (G-2): sc-376256**, our highly recommended monoclonal alternatives to DGUOK (G-14).