SANTA CRUZ BIOTECHNOLOGY, INC.

GALK1 (N-15): sc-46981

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Galactose kinase (GALK1), also often designated galactokinase, is important in the first step of the galactose metabolism pathway. GALK1, which belongs to the GHMP kinase family of proteins, is a crucial enzyme for galactose metabolism. Defects in the gene encoding for galactose kinase, GALK1, can cause galactosemia II, an autosomal recessive disorder characterized by congenital cataracts during infancy, often within the first two weeks of life. In the adult population it can cause presenile cataracts that are secondary to accumulation of galactitol in the lens of the eye.

REFERENCES

1. Hunter, M., et al. 2001. Novel mutations in the GALK1 gene in patients with galactokinase deficiency. Hum. Mutat. 17: 77-78.
2. Okano, Y, et al. 2001. A genetic factor for age-related cataract: identification and characterization of a novel galactokinase variant, "Osaka," in Asians. Am. J. Hum. Genet. 68: 1036-1042.

CHROMOSOMAL LOCATION

Genetic locus: GALK1 (human) mapping to 17q25.1; Galk1 (mouse) mapping to 11 E2.

SOURCE

GALK1 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of GALK1 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-46981 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GALK1 (N-15) is recommended for detection of GALK1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GALK1 (N-15) is also recommended for detection of GALK1 in additional species, including equine and canine.

Suitable for use as control antibody for GALK1 siRNA (h): sc-60671, GALK1 siRNA (m): sc-60672, GALK1 shRNA Plasmid (h): sc-60671-SH, GALK1 shRNA Plasmid (m): sc-60672-SH, GALK1 shRNA (h) Lentiviral Particles: sc-60671-V and GALK1 shRNA (m) Lentiviral Particles: sc-60672-V.

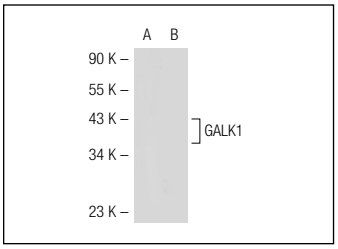
Molecular Weight of GALK1: 42 kDa.

Positive Controls: GALK1 (m): 293T Lysate: sc-125370, Hep G2 cell lysate: sc-2227 or Y79 cell lysate: sc-2240.

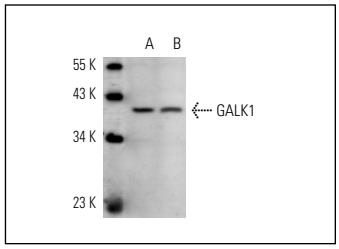
RECOMMENDED SECONDARY REAGENTS

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.

DATA



GALK1 (N-15): sc-46981. Western blot analysis of GALK1 expression in non-transfected: sc-117752 (**A**) and mouse GALK1 transfected: sc-125370 (**B**) 293T whole cell lysates.



GALK1 (N-15): sc-46981. Western blot analysis of GALK1 expression in Hep G2 (**A**) and Y79 (**B**) 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.

RESEARCH USE

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

PROTOCOLS

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