SANTA CRUZ BIOTECHNOLOGY, INC.

# GLIS3 (Q-21): sc-133626

## BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. GLIS3 (gLIS family zinc-finger 3), also known as ZNF515 (zinc-finger protein 515), is a 775 amino acid protein that localizes to the nucleus and contains five C2H2-type zinc-fingers. Expressed in a variety of tissues, including kidney, brain, liver, lung, ovary, pancreas, thymus and skeletal muscle, GLIS3 functions as both an activator and a suppressor of transcription, specifically binding the consensus sequence 5'-GACCACCCAC-3' through its C2H2-type zinc-fingers. Defects in the gene encoding GLIS3 are a cause of NDH syndrome; a neonatal diabetes that is characterized by congenital hypothyroidism, congenital glaucoma, hepatic fibrosis and polycystic kidneys.

## REFERENCES


1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610192. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Kim, Y.S., Nakanishi, G., Lewandoski, M. and Jetten, A.M. 2003. GLIS3, a novel member of the GLIS subfamily of Krüppel-like zinc-finger proteins with repressor and activation functions. Nucleic Acids Res. 31: 5513-5525.
3. Senée, V., Chelala, C., Duchatelet, S., Feng, D., Blanc, H., Cossec, J.C., Charon, C., Nicolino, M., Boileau, P., Cavener, D.R., Bougnères, P., Taha, D. and Julier, C. 2006. Mutations in GLIS3 are responsible for a rare syndrome with neonatal diabetes mellitus and congenital hypothyroidism. Nat. Genet. 38: 682-687.
5. Barbetti, F. 2007. Diagnosis of neonatal and infancy-onset diabetes. Endocr. Dev. 11: 83-93.
6. Beak, J.Y., Kang, H.S., Kim, Y.S. and Jetten, A.M. 2007. Krüppel-like zinc-finger protein GLIS3 promotes osteoblast differentiation by regulating FGF18 expression. J. Bone Miner. Res. 22: 1234-1244.
7. Beak, J.Y., Kang, H.S., Kim, Y.S. and Jetten, A.M. 2008. Functional analysis of the zinc-finger and activation domains of GLIS3 and mutant GLIS3 (NDH1). Nucleic Acids Res. 36: 1690-1702.


## CHROMOSOMAL LOCATION

Genetic locus: GLIS3 (human) mapping to 9p24.2.

## SOURCE

GLIS3 (Q-21) is an affinity purified rabbit polyclonal antibody raised against synthetic GLIS3 peptide of human origin.

## PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## STORAGE

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

## APPLICATIONS

GLIS3 (Q-21) is recommended for detection of GLIS3 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GLIS3 siRNA (h): sc-62382, GLIS3 shRNA Plasmid (h): sc-62382-SH and GLIS3 shRNA (h) Lentiviral Particles: sc-62382-V.

Molecular Weight of GLIS3: 84 kDa.

## 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).

## 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.