

GLIS3 (S-19): sc-67913

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 5 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 hypo-thyroidism, 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; Glis3 (mouse) mapping to 19 C1.

SOURCE

GLIS3 (S-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GLIS3 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-67913 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-67913 X, 200 µg/0.1 ml.

APPLICATIONS

GLIS3 (S-19) is recommended for detection of GLIS3 of mouse 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).

GLIS3 (S-19) is also recommended for detection of GLIS3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GLIS3 siRNA (h): sc-62382, GLIS3 siRNA (m): sc-62383, GLIS3 shRNA Plasmid (h): sc-62382-SH, GLIS3 shRNA Plasmid (m): sc-62383-SH, GLIS3 shRNA (h) Lentiviral Particles: sc-62382-V and GLIS3 shRNA (m) Lentiviral Particles: sc-62383-V.

GLIS3 (S-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of GLIS3: 84 kDa.

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.

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.