

GLIS1 (A-6): sc-365453

BACKGROUND

GLIS1 is a 789 amino acid protein encoded by the mouse gene *Glis1*. Located in the nucleus, GLIS1 acts as both a repressor and activator of transcription. GLIS1 belongs to the GLI C₂H₂-type zinc-finger protein family and contains five C₂H₂-type zinc fingers. GLIS1 is expressed in a temporal and spatial manner during development, with expression being most prominent in several de-fined structures of mesodermal lineage, including craniofacial regions, bran-chial arches, somites, vibrissal and hair follicles, limb buds, and myotomes. GLIS1 is a novel Krüppel-like protein that binds to the consensus sequence 5'-GACCACCCAC-3'. The Krüppel gene family characterized by a consensus C₂H₂ zinc finger domain and is believed to function as a transcription activator in the vertebrate Sonic hedgehog (Shh)-patched signal transduction pathway. Understanding GLI gene regulation may be of importance to understanding causes of human birth defects and cancer.

REFERENCES

1. Liu, C.Z., et al. 1998. Characterization of the promoter region and genomic organization of GLI, a member of the Sonic hedgehog-Patched signaling pathway. *Gene* 209: 1-11.
2. Zhang, F. and Jetten, A.M. 2001. Genomic structure of the gene encoding the human GLI-related, Krüppel-like zinc finger protein GLIS2. *Gene* 280: 49-57.
3. Zhang, F., et al. 2002. Characterization of GLIS, a novel gene encoding a GLI-related, Krüppel-like transcription factor with transactivation and repressor functions. Roles in kidney development and neurogenesis. *J. Biol. Chem.* 277: 10139-10149.
4. Kim, Y.S., et al. 2002. Identification of GLIS1, a novel GLI-related, Krüppel-like zinc finger protein containing transactivation and repressor functions. *J. Biol. Chem.* 277: 30901-30913.
5. Nakashima, M., et al. 2002. A novel gene, *GliH1*, with homology to the Gli zinc finger domain not required for mouse development. *Mech. Dev.* 119: 21-34.

CHROMOSOMAL LOCATION

Genetic locus: *Glis1* (mouse) mapping to 4 C7.

SOURCE

GLIS1 (A-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 689-719 within an internal region of GLIS1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-365453 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-365453 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

GLIS1 (A-6) is recommended for detection of GLIS1 of mouse and rat origin by Western Blotting (starting dilution 1:100, 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 GLIS1 siRNA (m): sc-62381, GLIS1 shRNA Plasmid (m): sc-62381-SH and GLIS1 shRNA (m) Lentiviral Particles: sc-62381-V.

GLIS1 (A-6) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

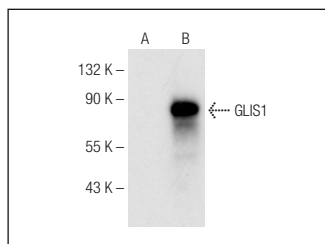
Molecular Weight of GLIS1: 84 kDa.

Positive Controls: KNRK nuclear extract: sc-2141, mouse kidney extract: sc-2255 or GLIS1 (m): 293T Lysate: sc-125388.

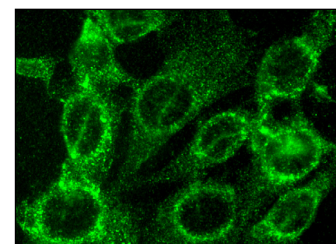
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



GLIS1 (A-6): sc-365453. Western blot analysis of GLIS1 expression in non-transfected: sc-117752 (A) and mouse GLIS1 transfected: sc-125388 (B) 293T whole cell lysates.



GLIS1 (A-6): sc-365453. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

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 for detailed protocols and support products.