

# GLIS1 (D-20): sc-67585

## BACKGROUND

GLIS1 is a 789 amino acid protein encoded by the human gene GLIS1. Located in the nucleus, GLIS1 acts as both a repressor and activator of transcription. GLIS1 belongs to the GLI C<sub>2</sub>H<sub>2</sub>-type zinc finger protein family and contains five C<sub>2</sub>H<sub>2</sub>-type zinc fingers. GLIS1 is expressed in a temporal and spatial manner during development, with expression being most prominent in several defined structures of mesodermal lineage. These include craniofacial regions, branchial 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 is characterized by a consensus C<sub>2</sub>H<sub>2</sub> 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., et al. 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 GLIS2, 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.

## CHROMOSOMAL LOCATION

Genetic locus: GLIS1 (human) mapping to 1p32.3; Glis1 (mouse) mapping to 4 C7.

## SOURCE

GLIS1 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of GLIS1 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-67585 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-67585 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

GLIS1 (D-20) is recommended for detection of GLIS1 of human and, to a lesser extent, mouse 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).

GLIS1 (D-20) is also recommended for detection of GLIS1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GLIS1 siRNA (h): sc-62380, GLIS1 siRNA (m): sc-62381, GLIS1 shRNA Plasmid (h): sc-62380-SH, GLIS1 shRNA Plasmid (m): sc-62381-SH, GLIS1 shRNA (h) Lentiviral Particles: sc-62380-V and GLIS1 shRNA (m) Lentiviral Particles: sc-62381-V.

GLIS1 (D-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of GLIS1: 84 kDa.

Positive Controls: JAR cell lysate: sc-2276.

## 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



GLIS1 (D-20): sc-67585. Western blot analysis of GLIS1 expression in non-transfected: sc-117752 (A) and mouse GLIS1 transfected: sc-125388 (B) 293T whole cell lysates.

## RESEARCH USE

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