SANTA CRUZ BIOTECHNOLOGY, INC.

GLIS2 (P-25): sc-133625

BACKGROUND

GLIS2, also known as NPHP7, NKL, neuronal Krueppel-like protein or zinc-finger protein GLIS2, is a 524 amino acid protein that belongs to the GLI C_2H_2-type zinc-finger protein family. By recruiting the corepressors CtBP1 and HDAC3, GLIS2 represses the transcriptional activation mediated by β-catenin in the Wnt pathway. GLIS2 can act either as a transcription repressor or as a transcription activator and may be involved in neuron differentiation. Mutations of GLIS2 may be associated with development of progressive chronic kidney disease with characteristics resembling nephronophthisis. GLIS2 contains five tandem Cys2-His2 zinc-finger motifs that exhibit the highest homology to those of members of the GLI and Zic subfamilies of Krüppel-like proteins. GLIS2 is expressed at high levels in kidney and at low levels in heart, lung and placenta.

REFERENCES

1. Gustafsson, M.K., et al. 2002. Myf5 is a direct target of long-range Shh signaling and Gli regulation for muscle specification. Genes Dev. 16: 114-126.
2. 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.
3. Kim, Y.S., et al. 2002. Identification of GLIS1, a novel Gli-related, Kruppel-like zinc-finger protein containing transactivation and repressor functions. J. Biol. Chem. 277: 30901-30913.
4. Kim, S.C., et al. 2005. Krüppel-like zinc-finger protein Gli-similar 2 (GLIS2) represses transcription through interaction with C-terminal binding protein 1 (CtBP1). Nucleic Acids Res. 33: 6805-6815.
5. Borello, U., et al. 2006. The Wnt/β-catenin pathway regulates Gli-mediated Myf5 expression during somitogenesis. Development 133: 3723-3732.
6. Kim, Y.S., et al. 2007. The Krüppel-like zinc-finger protein GLIS2 functions as a negative modulator of the Wnt/β-catenin signaling pathway. FEBS Lett. 581: 858-864.
7. Hosking, C.R., et al. 2007. The transcriptional repressor GLIS2 is a novel binding partner for p120 catenin. Mol. Biol. Cell 18: 1918-1927.
8. Attanasio, M., et al. 2007. Loss of GLIS2 causes nephronophthisis in humans and mice by increased apoptosis and fibrosis. Nat. Genet. 39: 1018-1024.
9. Kim, Y.S., et al. 2008. Kruppel-like zinc-finger protein GLIS2 is essential for the maintenance of normal renal functions. Mol. Cell. Biol. 28: 2358-2367.

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.

CHROMOSOMAL LOCATION

Genetic locus: GLIS2 (human) mapping to 16p13.3.

SOURCE

GLIS2 (P-25) is an affinity purified rabbit polyclonal antibody raised against synthetic GLIS2 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.

APPLICATIONS

GLIS2 (P-25) is recommended for detection of GLIS2 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 GLIS2 siRNA (h): sc-75142, GLIS2 shRNA Plasmid (h): sc-75142-SH and GLIS2 shRNA (h) Lentiviral Particles: sc-75142-V.

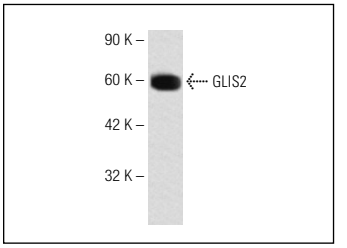
Molecular Weight of GLIS2: 56-60 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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).

DATA



GLIS2 (P-25): sc-133625. Western blot analysis of GLIS2 expression in Hep G2 whole cell lysate.

PROTOCOLS

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