SANTA CRUZ BIOTECHNOLOGY, INC.

GLIS2 siRNA (m): sc-75143

BACKGROUND

GLIS2, also known as NPHP7, NKL, neuronal Krüppel-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 Cys_2-His_2 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. Myf-5 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, Krüppel-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 Myf-5 expression during somitogenesis. Development 133: 3723-3732.

CHROMOSOMAL LOCATION

Genetic locus: Glis2 (mouse) mapping to 16 A1.

PRODUCT

GLIS2 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see GLIS2 shRNA Plasmid (m): sc-75143-SH and GLIS2 shRNA (m) Lentiviral Particles: sc-75143-V as alternate gene silencing products.

For independent verification of GLIS2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-75143A, sc-75143B and sc-75143C.

PROTOCOLS

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

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

GLIS2 siRNA (m) is recommended for the inhibition of GLIS2 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor GLIS2 gene expression knockdown using RT-PCR Primer: GLIS2 (m)-PR: sc-75143-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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