SANTA CRUZ BIOTECHNOLOGY, INC.

ZSCAN21 siRNA (h): sc-89895

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. The majority of zinc-finger proteins contain a Krüppel-type DNA binding domain and a KRAB domain, which is thought to interact with KAP1, thereby recruiting histone modifying proteins. ZSCAN21, also called ZNF38, Zipro1 or NY-REN-21, is the human homolog of the mouse Zscan21 protein and is a member of the Krüppel C_2H_2-type zinc-finger family of transcriptional regulators. Found in proliferating cells, ZSCAN21 is thought to be associated with gametogenesis in females and with meiosis in males. ZSCAN21 has a SCAN domain at the N-terminus and exhibits transcriptional activity by forming either a homodimer or a heterodimer with the protein SCAND1.

REFERENCES

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2. Yang, X.W., Wynder, C., Doughty, M.L. and Heintz, N. 1999. BAC-mediated gene-dosage analysis reveals a role for Zipro1 (Ru49/Zfp38) in progenitor cell proliferation in cerebellum and skin. Nat. Genet. 22: 327-335.
3. Carneiro, F.R., Silva, T.C., Alves, A.C., Haline-Vaz, T., Gozzo, F.C. and Zanchin, N.I. 2006. Spectroscopic characterization of the tumor antigen NY-REN-21 and identification of heterodimer formation with SCAND1. Biochem. Biophys. Res. Commun. 343: 260-268.
4. Saydam, O., Steiner, F., Vogt, B. and Schwyzer, M. 2006. Host cell targets of immediate-early protein BICP22 of bovine herpesvirus 1. Vet. Microbiol. 113: 185-192.
5. O'Geen, H., Squazzo, S.L., Iyengar, S., Blahnik, K., Rinn, J.L., Chang, H.Y., Green, R. and Farnham, P.J. 2007. Genome-wide analysis of KAP1 binding suggests autoregulation of KRAB-ZNFs. PLoS Genet. 3: e89.

CHROMOSOMAL LOCATION

Genetic locus: ZSCAN21 (human) mapping to 7q22.1.

PRODUCT

ZSCAN21 siRNA (h) 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 ZSCAN21 shRNA Plasmid (h): sc-89895-SH and ZSCAN21 shRNA (h) Lentiviral Particles: sc-89895-V as alternate gene silencing products.

For independent verification of ZSCAN21 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-89895A, sc-89895B and sc-89895C.

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

ZSCAN21 siRNA (h) is recommended for the inhibition of ZSCAN21 expression in human 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.

GENE EXPRESSION MONITORING

ZSCAN21 (3418F1a): sc-81142 is recommended as a control antibody for monitoring of ZSCAN21 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ZSCAN21 gene expression knockdown using RT-PCR Primer: ZSCAN21 (h)-PR: sc-89895-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.