ZNF71 siRNA (h): sc-77001



The Power to Question

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. ZNF71 (zinc finger protein 71), also known as EZFIT (endothelial zinc finger protein induced by tumor necrosis factor α), is a 489 amino acid nuclear protein that is thought to play a role in transcriptional regulation. A member of the Krüppel C_2H_2 -type zinc-finger protein family, ZNF71 contains 13 C_2H_2 -type zinc fingers and is expressed at highest levels in placenta, with slightly lower levels found in uterus, prostate, brain, peripheral blood leukocytes, testis, heart, pancreas and muscle.

REFERENCES

- Bray, P., Lichter, P., Thiesen, H.J., Ward, D.C. and Dawid, I.B. 1991. Characterization and mapping of human genes encoding zinc finger proteins. Proc. Natl. Acad. Sci. USA 88: 9563-9567.
- 2. Aubry, M., Marineau, C., Zhang, F.R., Zahed, L., Figlewicz, D., Delattre, O., Thomas, G., de Jong, P.J., Julien, J.P. and Rouleau, G.A. 1992. Cloning of six new genes with zinc finger motifs mapping to short and long arms of human acrocentric chromosome 22 (p and q11.2). Genomics 13: 641-648.
- Lichter, P., Bray, P., Ried, T., Dawid, I.B. and Ward, D.C. 1992. Clustering of C₂H₂ zinc finger motif sequences within telomeric and fragile site regions of human chromosomes. Genomics 13: 999-1007.
- Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 194545. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Mataki, C., Murakami, T., Umetani, M., Wada, Y., Ishii, M., Tsutsumi, S., Aburatani, H., Hamakubo, T. and Kodama, T. 2000. A novel zinc finger protein mRNA in human umbilical vein endothelial cells is profoundly induced by tumor necrosis factor α. J. Atheroscler. Thromb. 7: 97-103.
- Urrutia, R. 2003. KRAB-containing zinc-finger repressor proteins. Genome Biol. 4: 231.
- 7. Huntley, S., Baggott, D.M., Hamilton, A.T., Tran-Gyamfi, M., Yang, S., Kim, J., Gordon, L., Branscomb, E. and Stubbs, L. 2006. A comprehensive catalog of human KRAB-associated zinc finger genes: insights into the evolutionary history of a large family of transcriptional repressors. Genome Res. 16: 669-677.
- 8. Filion, G.J., Zhenilo, S., Salozhin, S., Yamada, D., Prokhortchouk, E. and Defossez, P.A. 2006. A family of human zinc finger proteins that bind methylated DNA and repress transcription. Mol. Cell. Biol. 26: 169-181.
- 9. Tian, C.Y., Zhang, L.Q. and He, F.C. 2006. Progress in the study of KRAB zinc finger protein. Yi Chuan 28: 1451-1456.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: ZNF71 (human) mapping to 19q13.43.

PRODUCT

ZNF71 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 ZNF71 shRNA Plasmid (h): sc-77001-SH and ZNF71 shRNA (h) Lentiviral Particles: sc-77001-V as alternate gene silencing products.

For independent verification of ZNF71 (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-77001A, sc-77001B and sc-77001C.

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

APPLICATIONS

ZNF71 siRNA (h) is recommended for the inhibition of ZNF71 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ZNF71 gene expression knockdown using RT-PCR Primer: ZNF71 (h)-PR: sc-77001-PR (20 μ l). 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.

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