

# ZNF266 siRNA (m): sc-140396

## 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. ZNF266 is a 549 amino acid nuclear protein belonging to the Krüppel C<sub>2</sub>H<sub>2</sub>-type zinc finger protein family. ZNF266 has one KRAB domain and 14 C<sub>2</sub>H<sub>2</sub> zinc fingers. Due to the presence of these domains, ZNF266 is thought to be involved in transcriptional regulation. Repression of ZNF266 results in the blocking of erythroid differentiation and partial blocking of megakaryocytic differentiation, possibly indicating a role in the differentiation of erythroids and megakaryocytes.

## REFERENCES

1. Bellefroid, E.J., Poncelet, D.A., Lecocq, P.J., Revelant, O. and Martial, J.A. 1991. The evolutionarily conserved Krüppel-associated box domain defines a subfamily of eukaryotic multifingered proteins. *Proc. Natl. Acad. Sci. USA* 88: 3608-3612.
2. Pengue, G., Calabrò, V., Bartoli, P.C., Pagliuca, A. and Lania, L. 1994. Repression of transcriptional activity at a distance by the evolutionarily conserved KRAB domain present in a subfamily of zinc finger proteins. *Nucleic Acids Res.* 22: 2908-2914.
3. Margolin, J.F., Friedman, J.R., Meyer, W.K., Vissing, H., Thiesen, H.J. and Rauscher, F.J. 1994. Krüppel-associated boxes are potent transcriptional repression domains. *Proc. Natl. Acad. Sci. USA* 91: 4509-4513.
4. Abrink, M., Aveskogh, M. and Hellman, L. 1995. Isolation of cDNA clones for 42 different Krüppel-related zinc finger proteins expressed in the human monoblast cell line U-937. *DNA Cell Biol.* 14: 125-136.
5. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604749. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Shannon, M., Hamilton, A.T., Gordon, L., Branscomb, E. and Stubbs, L. 2003. Differential expansion of zinc-finger transcription factor loci in homologous human and mouse gene clusters. *Genome Res.* 13: 1097-1110.
7. Peng, H., Du, Z.W. and Zhang, J.W. 2006. Identification and characterization of a novel zinc finger protein (HZF1) gene and its function in erythroid and megakaryocytic differentiation of K-562 cells. *Leukemia* 20: 1109-1116.

## CHROMOSOMAL LOCATION

Genetic locus: Zfp266 (mouse) mapping to 9 A3.

## PRODUCT

ZNF266 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ZNF266 shRNA Plasmid (m): sc-140396-SH and ZNF266 shRNA (m) Lentiviral Particles: sc-140396-V as alternate gene silencing 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

ZNF266 siRNA (m) is recommended for the inhibition of ZNF266 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  $\mu$ M in 66  $\mu$ l. 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 ZNF266 gene expression knockdown using RT-PCR Primer: ZNF266 (m)-PR: sc-140396-PR (20  $\mu$ 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.