SANTA CRUZ BIOTECHNOLOGY, INC.

ZNF268 siRNA (h): sc-96152

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. Zinc finger protein 268 (ZNF268), also known as zinc finger protein 3 or HZF3, is a 947 amino acid protein belonging to the Krüppel C_2H_2-type zinc-finger protein family. ZNF268 contains 24 C_2H_2-type zinc fingers and one KRAB domain. Localized to the nucleus, ZNF268 is involved in transcriptional regulation and is highly expressed in three to five week old embryos. ZNF268 has been implicated in human leukemia, due to the identification of an alternatively spliced form in leukemia patients. Two named isoforms of ZNF268 exist as a result of alternative splicing events.

REFERENCES

1. Sun, Y., et al. 2003. The KRAB domain of zinc finger gene ZNF268: a potential transcriptional repressor. IUBMB Life 55: 127-131.
2. Sun, Y., et al. 2004. ZNF268, a novel Krüppel-like zinc finger protein, is implicated in early human liver development. Int. J. Mol. Med. 14: 971-975.
3. Peng, X., et al. 2004. Cloning and functional analysis of the promoter of ZNF268 gene. Yi Chuan Xue Bao 31: 221-226.
4. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 604753. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Shao, H., et al. 2006. KRAB-containing zinc finger gene ZNF268 encodes multiple alternatively spliced isoforms that contain transcription regulatory domains. Int. J. Mol. Med. 18: 457-463.
6. Zhu, C., et al. 2008. The mammalian gene ZNF268 is regulated by hUpf1. Biochemistry 73: 881-885.
7. Wang, D., et al. 2008. Human T-cell leukemia virus type 1 oncoprotein tax represses ZNF268 expression through the cAMP-responsive element-binding protein/activating transcription factor pathway. J. Biol. Chem. 283: 16299-16308.

CHROMOSOMAL LOCATION

Genetic locus: ZNF268 (human) mapping to 12q24.33.

PRODUCT

ZNF268 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 ZNF268 shRNA Plasmid (h): sc-96152-SH and ZNF268 shRNA (h) Lentiviral Particles: sc-96152-V as alternate gene silencing products.

For independent verification of ZNF268 (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-96152A, sc-96152B and sc-96152C.

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

ZNF268 siRNA (h) is recommended for the inhibition of ZNF268 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 ZNF268 gene expression knockdown using RT-PCR Primer: ZNF268 (h)-PR: sc-96152-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.

PROTOCOLS

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