

ZNF24 siRNA (h): sc-76969

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. ZNF24 (zinc finger protein 24), also known as ZNF191, KOX17, ZSCAN3 or RSG-A, is a 368 amino acid nuclear protein that belongs to the Krüppel C₂H₂-type zinc-finger protein family. Expressed in tissues throughout the body with the exception of heart, ZNF24 functions as a transcriptional repressor for a variety of proteins, such as VEGF (vascular endothelial growth factor), and is thought to be important for early embryonic development and cell proliferation. ZNF24 contains four C₂H₂-type zinc fingers and one SCAN box domain and, upon DNA damage, may be phosphorylated by ATM or ATR.

REFERENCES

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2. Shi, S.L., et al. 1998. Assignment of a novel zinc finger gene ZNF191 to human chromosome 18Q12.1 by human/rodent somatic cell hybrid panel and fluorescent *in situ* hybridization. *Shi Yan Sheng Wu Xue Bao* 31: 21-27.
3. Han, Z.G., et al. 1999. Molecular cloning of six novel Krüppel-like zinc finger genes from hematopoietic cells and identification of a novel transregulatory domain KRNB. *J. Biol. Chem.* 274: 35741-35748.
4. Williams, A.J., et al. 1999. The zinc finger-associated SCAN box is a conserved oligomerization domain. *Mol. Cell. Biol.* 19: 8526-8535.
5. Li, J.Z., et al. 2004. Establishment of transgenic mice carrying gene encoding human zinc finger protein 191. *World J. Gastroenterol.* 10: 264-267.
6. Li, J., et al. 2006. The zinc finger transcription factor 191 is required for early embryonic development and cell proliferation. *Exp. Cell Res.* 312: 3990-3998.
7. Harper, J., et al. 2007. Repression of vascular endothelial growth factor expression by the zinc finger transcription factor ZNF24. *Cancer Res.* 67: 8736-8741.

CHROMOSOMAL LOCATION

Genetic locus: ZNF24 (human) mapping to 18q12.2.

PRODUCT

ZNF24 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ZNF24 shRNA Plasmid (h): sc-76969-SH and ZNF24 shRNA (h) Lentiviral Particles: sc-76969-V as alternate gene silencing products.

For independent verification of ZNF24 (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-76969A, sc-76969B and sc-76969C.

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

ZNF24 siRNA (h) is recommended for the inhibition of ZNF24 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 μ M in 66 μ 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.

GENE EXPRESSION MONITORING

ZNF24 (H-11): sc-393359 is recommended as a control antibody for monitoring of ZNF24 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).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ZNF24 gene expression knockdown using RT-PCR Primer: ZNF24 (h)-PR: sc-76969-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.

PROTOCOLS

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