

ZNF19 siRNA (h): sc-93436

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. ZNF19, also known as KOX12, belongs to the Krüppel C₂H₂-type zinc-finger family of transcriptional regulators. ZNF19 is 458 amino acids in length and contains ten C₂H₂-type zinc fingers and one KRAB domain. Expression of ZNF19 is localized to the nucleus.

REFERENCES

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2. Rousseau-Merck, M.F., et al. 1994. Chromosomal localization of 9 KOX zinc finger genes: physical linkages suggest clustering of KOX genes on chromosomes 12, 16, and 19. *Hum. Genet.* 92: 583-587.
3. Sun, Y., et al. 2003. The KRAB domain of zinc finger gene ZNF268: a potential transcriptional repressor. *IUBMB Life* 55: 127-131.
4. Rousseau-Merck, M.F., et al. 2003. The KOX zinc finger genes: genome wide mapping of 3.ZNF PAC clones with zinc finger gene clusters predominantly in 23 chromosomal loci are confirmed by human sequences annotated in Ensembl. *Cytogenet. Genome Res.* 98: 147-153.
5. Nakamura, M., et al. 2004. A novel subfamily of zinc finger genes involved in embryonic development. *J. Cell. Biochem.* 93: 887-895.
6. Englbrecht, C.C., et al. 2004. Conservation, diversification and expansion of C₂H₂ zinc finger proteins in the *Arabidopsis thaliana* genome. *BMC Genomics* 5: 39.
7. Li, Y., et al. 2006. A novel zinc-finger protein ZNF436 suppresses transcriptional activities of AP-1 and SRE. *Mol. Biol. Rep.* 33: 287-294.

CHROMOSOMAL LOCATION

Genetic locus: ZNF19 (human) mapping to 16q22.2.

PRODUCT

ZNF19 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 ZNF19 shRNA Plasmid (h): sc-93436-SH and ZNF19 shRNA (h) Lentiviral Particles: sc-93436-V as alternate gene silencing products.

For independent verification of ZNF19 (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-93436A, sc-93436B and sc-93436C.

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 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

ZNF19 siRNA (h) is recommended for the inhibition of ZNF19 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

ZNF19 (B-11): sc-166026 is recommended as a control antibody for monitoring of ZNF19 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 ZNF19 gene expression knockdown using RT-PCR Primer: ZNF19 (h)-PR: sc-93436-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.