

# ZNF193 siRNA (h): sc-95350

## 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. ZNF193 (zinc finger protein 193), also known as cell proliferation-inducing gene 12 protein, PRD51 or ZSCAN9 (zinc finger and SCAN domain-containing protein 9), is a 394 amino acid nuclear protein implicated in transcriptional regulation. A member of the Krüppel C<sub>2</sub>H<sub>2</sub>-type zinc-finger protein family, ZNF193 contains one SCAN box domain and five C<sub>2</sub>H<sub>2</sub>-type zinc fingers. The gene encoding ZNF193 maps to human chromosome 6p22.1.

## REFERENCES

1. Bray, P., et al. 1991. Characterization and mapping of human genes encoding zinc finger proteins. *Proc. Natl. Acad. Sci. USA* 88: 9563-9567.
2. Lichter, P., et al. 1992. Clustering of C<sub>2</sub>H<sub>2</sub> zinc finger motif sequences within telomeric and fragile site regions of human chromosomes. *Genomics* 13: 999-1007.
3. Lee, P.L., et al. 1997. Three genes encoding zinc finger proteins on human chromosome 6p21.3: members of a new subclass of the Krüppel gene family containing the conserved SCAN box domain. *Genomics* 43: 191-201.
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. Huntley, S., et al. 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.
6. Filion, G.J., et al. 2006. A family of human zinc finger proteins that bind methylated DNA and repress transcription. *Mol. Cell. Biol.* 26: 169-181.
7. Tian, C.Y., et al. 2006. Progress in the study of KRAB zinc finger protein. *Yi Chuan* 28: 1451-1456.

## CHROMOSOMAL LOCATION

Genetic locus: ZSCAN9 (human) mapping to 6p22.1.

## PRODUCT

ZNF193 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ZNF193 shRNA Plasmid (h): sc-95350-SH and ZNF193 shRNA (h) Lentiviral Particles: sc-95350-V as alternate gene silencing products.

For independent verification of ZNF193 (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-95350A, sc-95350B and sc-95350C.

## PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ 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

ZNF193 siRNA (h) is recommended for the inhibition of ZNF193 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  $\mu$ 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.

## GENE EXPRESSION MONITORING

ZNF193 (F-8): sc-398689 is recommended as a control antibody for monitoring of ZNF193 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 ZNF193 gene expression knockdown using RT-PCR Primer: ZNF193 (h)-PR: sc-95350-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.