

ZFP296 siRNA (m): sc-155543

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. ZFP296 (zinc finger protein 296) is a 445 amino acid nuclear protein belonging to the Krüppel C₂H₂-type zinc-finger protein family. Encoded by a gene located on human chromosome 19q13.32 and mouse chromosome 7 A3, ZFP296 may be involved in transcriptional regulation. Human chromosome 19 consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes.

REFERENCES

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2. Laity, J.H., Lee, B.M. and Wright, P.E. 2001. Zinc finger proteins: new insights into structural and functional diversity. *Curr. Opin. Struct. Biol.* 11: 39-46.
3. Matthews, J.M. and Sunde, M. 2002. Zinc fingers—folds for many occasions. *IUBMB Life* 54: 351-355.
4. Brown, R.S. 2005. Zinc finger proteins: getting a grip on RNA. *Curr. Opin. Struct. Biol.* 15: 94-98.
5. Hall, T.M. 2005. Multiple modes of RNA recognition by zinc finger proteins. *Curr. Opin. Struct. Biol.* 15: 367-373.
6. Gamsjaeger, R., Liew, C.K., Loughlin, F.E., Crossley, M. and Mackay, J.P. 2007. Sticky fingers: zinc-fingers as protein-recognition motifs. *Trends Biochem. Sci.* 32: 63-70.

CHROMOSOMAL LOCATION

Genetic locus: Zfp296 (mouse) mapping to 7 A3.

PRODUCT

ZFP296 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ZFP296 shRNA Plasmid (m): sc-155543-SH and ZFP296 shRNA (m) Lentiviral Particles: sc-155543-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 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

ZFP296 siRNA (m) is recommended for the inhibition of ZFP296 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 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

ZNF296 (C-12): sc-514868 is recommended as a control antibody for monitoring of ZFP296 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 ZFP296 gene expression knockdown using RT-PCR Primer: ZFP296 (m)-PR: sc-155543-PR (20 μ l, 462 bp). 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.