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# ZNF313 siRNA (m): sc-155684

## 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. ZNF313 (zinc finger protein 313), also known as RNF114 (RING finger protein 114) or ZNF228, is a 228 amino acid protein that contains one RING-type zinc finger (a domain that can bind two zinc atoms and is involved in the ubiquitination pathway) and is expressed abundantly in mature testis. Existing as two isoforms due to alternative splicing events, ZNF313 is thought to play a role in spermatogenesis and male fertility. In addition, the gene encoding ZNF313 may be associated with an increased susceptibility to psoriasis, an immune-mediated skin disease characterized by red, scaly patches on the epidermis.

## REFERENCES

1. 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.
2. Sun, Y., et al. 2003. The KRAB domain of zinc finger gene ZNF268: a potential transcriptional repressor. *IUBMB Life* 55: 127-131.
3. 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 4. *Cytogenet. Genome Res.* 98: 147-153.
4. Ma, Y.X., et al. 2003. Identification of a novel human zinc finger protein gene ZNF313. *Sheng Wu Hua Xue Yu Sheng Wu Wu Li Xue Bao* 35: 230-237.
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 C<sub>2</sub>H<sub>2</sub> zinc finger proteins in the *Arabidopsis thaliana* genome. *BMC Genomics* 5: 39.
7. O'Geen, H., et al. 2007. Genome-wide analysis of KAP1 binding suggests autoregulation of KRAB-ZNFs. *PLoS Genet.* 3: e89.
8. Li, N., et al. 2007. Cloning and expression analysis of a novel mouse zinc finger protein gene Znf313 abundantly expressed in testis. *J. Biochem. Mol. Biol.* 40: 270-276.
9. Capon, F., et al. 2008. Identification of ZNF313/RNF114 as a novel psoriasis susceptibility gene. *Hum. Mol. Genet.* 17: 1938-1945.

## CHROMOSOMAL LOCATION

Genetic locus: Rnf114 (mouse) mapping to 2 H3.

## PRODUCT

ZNF313 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ZNF313 shRNA Plasmid (m): sc-155684-SH and ZNF313 shRNA (m) Lentiviral Particles: sc-155684-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  $\mu$ 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

ZNF313 siRNA (m) is recommended for the inhibition of ZNF313 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  $\mu$ 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

ZNF313 (E-12): sc-514603 is recommended as a control antibody for monitoring of ZNF313 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 ZNF313 gene expression knockdown using RT-PCR Primer: ZNF313 (m)-PR: sc-155684-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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.