

ZFAND1 siRNA (m): sc-155512

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. ZFAND1 (AN1-type zinc finger protein 1) is a 268 amino acid protein that contains two AN1-type zinc fingers, which are often found in proteins that contain a ubiquitin-like domain and therefore play a role in the ubiquitination pathway. AN1-type zinc fingers contains six conserved cysteines and two histidines and have a dimetal (zinc)-bound α/β fold. There are two isoforms of ZFAND1 that are produced as a result of alternative splicing events.

REFERENCES

1. Linnen, J.M., Bailey, C.P. and Weeks, D.L. 1993. Two related localized mRNAs from *Xenopus laevis* encode ubiquitin-like fusion proteins. *Gene* 128: 181-188.
2. Klug, A. 1999. Zinc finger peptides for the regulation of gene expression. *J. Mol. Biol.* 293: 215-218.
3. 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.
4. Matthews, J.M. and Sunde, M. 2002. Zinc fingers—folds for many occasions. *IUBMB Life* 54: 351-355.
5. Huang, J., Teng, L., Li, L., Liu, T., Li, L., Chen, D., Xu, L.G., Zhai, Z. and Shu, H.B. 2004. ZNF216 is an A20-like and I κ B kinase γ -interacting inhibitor of NF κ B activation. *J. Biol. Chem.* 279: 16847-16853.
6. Brown, R.S. 2005. Zinc finger proteins: getting a grip on RNA. *Curr. Opin. Struct. Biol.* 15: 94-98.
7. Hall, T.M. 2005. Multiple modes of RNA recognition by zinc finger proteins. *Curr. Opin. Struct. Biol.* 15: 367-373.
8. 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.
9. Huang, J., Wang, M.M., Jiang, Y., Bao, Y.M., Huang, X., Sun, H., Xu, D.Q., Lan, H.X. and Zhang, H.S. 2008. Expression analysis of rice A20/AN1-type zinc finger genes and characterization of ZFP177 that contributes to temperature stress tolerance. *Gene* 420: 135-144.

CHROMOSOMAL LOCATION

Genetic locus: Zfand1 (mouse) mapping to 3 A1.

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.

PRODUCT

ZFAND1 siRNA (m) is a pool of 2 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 ZFAND1 shRNA Plasmid (m): sc-155512-SH and ZFAND1 shRNA (m) Lentiviral Particles: sc-155512-V as alternate gene silencing products.

For independent verification of ZFAND1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-155512A and sc-155512B.

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

ZFAND1 siRNA (m) is recommended for the inhibition of ZFAND1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ZFAND1 gene expression knockdown using RT-PCR Primer: ZFAND1 (m)-PR: sc-155512-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.