

ZFAND2B siRNA (m): sc-155514

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. ZFAND2B (AN1-type zinc finger protein 2B) is a 257 amino acid protein containing two AN1-type zinc fingers and two UIM (ubiquitin-interacting motif) repeats. Conserved in animals and plants, the AN1-type zinc finger domain is often found in proteins that contain a ubiquitin-like domain, which suggests a role in the ubiquitination pathway. There are two isoforms of ZFAND2B 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: Zfand2b (mouse) mapping to 1 C3.

PRODUCT

ZFAND2B 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 ZFAND2B shRNA Plasmid (m): sc-155514-SH and ZFAND2B shRNA (m) Lentiviral Particles: sc-155514-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

ZFAND2B siRNA (m) is recommended for the inhibition of ZFAND2B 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

ZFAND2B (D-2): sc-398000 is recommended as a control antibody for monitoring of ZFAND2B 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 ZFAND2B gene expression knockdown using RT-PCR Primer: ZFAND2B (m)-PR: sc-155514-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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.