

## ZBTB43 siRNA (h): sc-92965

### 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. Zinc finger and BTB domain-containing protein 43 (ZBTB43), also known as ZNF297B or ZBTB22B, is a 467 amino acid member of the Krüppel C<sub>2</sub>H<sub>2</sub>-type zinc-finger protein family. Localized to the nucleus, ZBTB43 contains a BTB domain, also known as a POZ domain, which inhibits DNA binding and mediates homotypic and heterotypic dimerization. Characteristics of the BTB domain and the interaction of ZBTB43 with BDP1 suggest that ZBTB43 functions as a transcription regulator.

### REFERENCES

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2. Abrink, M., Aveskogh, M. and Hellman, L. 1995. Isolation of cDNA clones for 42 different Krüppel-related zinc finger proteins expressed in the human monoblast cell line U-937. *DNA Cell Biol.* 14: 125-136.
3. Ishiguro, A., Kassavetis, G.A. and Geiduschek, E.P. 2002. Essential roles of Bdp1, a subunit of RNA polymerase III initiation factor TFIIIB, in transcription and tRNA processing. *Mol. Cell. Biol.* 22: 3264-3275.
4. Schoenen, F. and Wirth, B. 2006. The zinc finger protein ZNF297B interacts with BDP1, a subunit of TFIIIB. *Biol. Chem.* 387: 277-284.
5. Smith, T.H., Stedronsky, K., Morgan, B. and McGowan, R.A. 2006. Identification and isolation of a BTB-POZ-containing gene expressed in oocytes and early embryos of the zebrafish *Danio rerio*. *Genome* 49: 808-814.
6. Liu, J. and Stormo, G.D. 2008. Context-dependent DNA recognition code for C<sub>2</sub>H<sub>2</sub> zinc-finger transcription factors. *Bioinformatics* 24: 1850-1857.

### CHROMOSOMAL LOCATION

Genetic locus: ZBTB43 (human) mapping to 9q33.3.

### PRODUCT

ZBTB43 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 ZBTB43 shRNA Plasmid (h): sc-92965-SH and ZBTB43 shRNA (h) Lentiviral Particles: sc-92965-V as alternate gene silencing products.

For independent verification of ZBTB43 (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-92965A, sc-92965B and sc-92965C.

### 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

ZBTB43 siRNA (h) is recommended for the inhibition of ZBTB43 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.

### RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ZBTB43 gene expression knockdown using RT-PCR Primer: ZBTB43 (h)-PR: sc-92965-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.