ZBTB22 siRNA (h): sc-95391



The Power to Question

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 BTV domain-containing protein 22 (ZBTB22), also known as ZNF297 or BING1, is a 634 amino acid member of the Krüppel C₂H₂-type zinc-finger protein family. Localized to the nucleus, ZBTB22 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 suggest that ZBTB22 functions as a transcription regulator.

REFERENCES

- Herberg, J.A., Beck, S. and Trowsdale, J. 1998. TAPASIN, DAXX, RGL2, HKE2 and four new genes (BING 1, 3 to 5) form a dense cluster at the centromeric end of the MHC. J. Mol. Biol. 277: 839-857.
- Walter, L. and Günther, E. 2000. Physical mapping and evolution of the centromeric class I gene-containing region of the rat MHC. Immunogenetics 51: 829-837.
- Sültmann, H., Murray, B.W. and Klein, J. 2000. Identification of seven genes in the major histocompatibility complex class I region of the zebrafish. Scand. J. Immunol. 51: 577-585.
- Matsuzaka, Y., Makino, S., Nakajima, K., Tomizawa, M., Oka, A., Kimura, M., Bahram, S., Tamiya, G. and Inoko, H. 2000. New polymorphic microsatellite markers in the human MHC class II region. Tissue Antigens 56: 492-500.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611439. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- 6. Schoenen, F. and Wirth, B. 2006. The zinc finger protein ZNF297B interacts with BDP1, a subunit of TFIIIB. Biol. Chem. 387: 277-284.
- Tadepally, H.D., Burger, G. and Aubry, M. 2008. Evolution of C₂H₂-zinc finger genes and subfamilies in mammals: species-specific duplication and loss of clusters, genes and effector domains. BMC Evol. Biol. 8: 176.

CHROMOSOMAL LOCATION

Genetic locus: ZBTB22 (human) mapping to 6p21.32.

PRODUCT

ZBTB22 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ZBTB22 shRNA Plasmid (h): sc-95391-SH and ZBTB22 shRNA (h) Lentiviral Particles: sc-95391-V as alternate gene silencing products.

For independent verification of ZBTB22 (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-95391A, sc-95391B and sc-95391C.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20 $^{\circ}$ C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20 $^{\circ}$ 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

ZBTB22 siRNA (h) is recommended for the inhibition of ZBTB22 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 µM in 66 µl. 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 ZBTB22 gene expression knockdown using RT-PCR Primer: ZBTB22 (h)-PR: sc-95391-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.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com