SANTA CRUZ BIOTECHNOLOGY, INC.

ZMAT1 siRNA (h): sc-91107

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. Zinc finger matrin-type protein 1 (ZMAT1) is a 638 amino acid protein that contains three matrin-type zinc fingers. The matrin-type zinc finger, which is very similar in structure to the classical DNA-binding C_2H_2 zinc finger, was first identified in the protein matrin-3. It has also been identified in several spliceosome RNA-binding proteins, suggesting a role in pre-mRNA binding. ZMAT1 is localized to the nucleus, and alternative splicing events produce two isoforms of this protein.

REFERENCES

1. Thiesen, H.J. 1990. Multiple genes encoding zinc finger domains are expressed in human T cells. New Biol. 2: 363-374.
2. Rossi, F., Forne, T., Antoine, E., Tazi, J., Brunel, C. and Cathala, G. 1996. Involvement of U1 small nuclear ribonucleoproteins (snRNP) in 5' splice site-U1 snRNP interaction. J. Biol. Chem. 271: 23985-23991.
3. Matsushima, Y., Matsumura, K. and Kitagawa, Y. 1997. Zinc finger-like motif conserved in a family of RNA binding proteins. Biosci. Biotechnol. Biochem. 61: 905-906.
4. Hibino, Y. 2000. Functional arrangement of genomic DNA and structure of nuclear matrix. Yakugaku Zasshi 120: 520-533.
5. Durand, S., Abadie, P., Angeletti, S. and Genti-Raimondi, S. 2003. Identification of multiple differentially expressed messenger RNAs in normal and pathological trophoblast. Placenta 24: 209-218.
6. Liu, J. and Stormo, G.D. 2008. Context-dependent DNA recognition code for C_2H_2 zinc-finger transcription factors. Bioinformatics 24: 1850-1857.

CHROMOSOMAL LOCATION

Genetic locus: ZMAT1 (human) mapping to Xq22.1.

PRODUCT

ZMAT1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ZMAT1 shRNA Plasmid (h): sc-91107-SH and ZMAT1 shRNA (h) Lentiviral Particles: sc-91107-V as alternate gene silencing products.

For independent verification of ZMAT1 (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-91107A, sc-91107B and sc-91107C.

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.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

ZMAT1 siRNA (h) is recommended for the inhibition of ZMAT1 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 ZMAT1 gene expression knockdown using RT-PCR Primer: ZMAT1 (h)-PR: sc-91107-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.