SANTA CRUZ BIOTECHNOLOGY, INC.

ZBED1 siRNA (h): sc-91580

BACKGROUND

ZBED1 (zinc finger BED domain-containing protein 1), also known as ALTE (Ac-like transposable element), DREF or TRAMP, is a 694 amino acid protein that localizes specifically to granular structures within the nucleus. Expressed ubiquitously at low levels and present at higher levels in heart, placenta, spleen and skeletal muscle, ZBED1 is thought to function as a transcription factor that regulates a number of ribosomal protein (RP) encoding genes, thereby playing a role in the cell cycle and in cell proliferation events. ZBED1 contains one BED-type zinc finger and binds specifically to 5'-TGTCG[CT]GA [CT] A-3' DNA regions found in RP promotors. Additionally, ZBED1 binds strongly to the promotor region of Histone H1 (a protein required for the condensation of nucleosomes into higher order structures), subsequently activating H1 transcription.

REFERENCES

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2. Nagase, T., et al. 1998. Prediction of the coding sequences of unidentified human genes. XI. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 5: 277-286.
3. Esposito, T., et al. 1999. A novel pseudoautosomal human gene encodes a putative protein similar to Ac-like transposases. Hum. Mol. Genet. 8: 61-67.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300178. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Ohshima, N., et al. 2003. Identification of a human homologue of the DREF transcription factor with a potential role in regulation of the Histone H1 gene. J. Biol. Chem. 278: 22928-22938.
6. Yamashita, D., et al. 2007. Human DNA replication-related element binding factor (hDREF) self-association via hATC domain is necessary for its nuclear accumulation and DNA binding. J. Biol. Chem. 282: 7563-7575.

CHROMOSOMAL LOCATION

Genetic locus: ZBED1 (human) mapping to Xp22.33/Yp11.31.

PRODUCT

ZBED1 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 ZBED1 shRNA Plasmid (h): sc-91580-SH and ZBED1 shRNA (h) Lentiviral Particles: sc-91580-V as alternate gene silencing products.

For independent verification of ZBED1 (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-91580A, sc-91580B and sc-91580C.

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

ZBED1 siRNA (h) is recommended for the inhibition of ZBED1 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.

GENE EXPRESSION MONITORING

ZBED1 (H-9): sc-393684 is recommended as a control antibody for monitoring of ZBED1 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 ZBED1 gene expression knockdown using RT-PCR Primer: ZBED1 (h)-PR: sc-91580-PR (20 µl). 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.