SANTA CRUZ BIOTECHNOLOGY, INC.

TEF-5 siRNA (h): sc-95636

BACKGROUND

The transcriptional enhancer factor (TEF)/TEAD family of proteins includes TEF-1, TEF-3, TEF-4 and TEF-5, all of which share a highly conserved 68 amino acid TEA/ATTS DNA-binding domain. TEF-5 (transcriptional enhancer factor-5), also known as TEAD3, TEAD5, DTEF-1 or ETFR-1, is a 435 amino acid nuclear protein that contains one TEA DNA-binding domain and belongs to the TEF transcriptional enhancer family. Expressed predominately in placental tissue and skeletal muscle, TEF-5 binds to multiple sites in the promotor of Placental lactogen II (also known as chorionic somatomammotropin-B) and, via this binding, enhances Placental lactogen II transcription. Due to its ability to enhance the expression of placenta-related genes, TEF-5 is thought to function as an important regulatory protein within the human placenta.

REFERENCES

1. Yasunami, M., et al. 1996. A novel family of TEA domain-containing transcription factors with distinct spatiotemporal expression patterns. Biochem. Biophys. Res. Commun. 228: 365-370.
2. Azakie, A., et al. 1996. DTEF-1, a novel member of the transcription enhancer factor-1 (TEF-1) multigene family. J. Biol. Chem. 271: 8260-8265.
3. Jacquemin, P., et al. 1997. Human TEF-5 is preferentially expressed in placenta and binds to multiple functional elements of the human chorionic somatomammotropin-B gene enhancer. J. Biol. Chem. 272: 12928-12937.
4. Jacquemin, P., et al. 1998. Differential expression of the TEF family of transcription factors in the murine placenta and during differentiation of primary human trophoblasts *in vitro*. Dev. Dyn. 212: 423-436.
5. Jiang, S.W., et al. 1999. Human placental TEF-5 transactivates the human chorionic somatomammotropin gene enhancer. Mol. Endocrinol. 13: 879-889.
6. Maeda, T., et al. 2002. TEF-1 transcription factors regulate activity of the mouse mammary tumor virus LTR. Biochem. Biophys. Res. Commun. 296: 1279-1285.
7. Maeda, T., et al. 2002. Mouse DTEF-1 (ETFR-1, TEF-5) is a transcriptional activator in α 1-adrenergic agonist-stimulated cardiac myocytes. J. Biol. Chem. 277: 24346-24352.
8. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 603170. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
9. Peng, L., et al. 2004. Transcription enhancer factor-5 and a GATA-like protein determine placental-specific expression of the Type I human 3β-hydroxysteroid dehydrogenase gene, HSD3B1. Mol. Endocrinol. 18: 2049-2060.

CHROMOSOMAL LOCATION

Genetic locus: TEAD3 (human) mapping to 6p21.31.

PROTOCOLS

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

PRODUCT

TEF-5 siRNA (h) is a pool of 2 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 TEF-5 shRNA Plasmid (h): sc-95636-SH and TEF-5 shRNA (h) Lentiviral Particles: sc-95636-V as alternate gene silencing products.

For independent verification of TEF-5 (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-95636A and sc-95636B.

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

TEF-5 siRNA (h) is recommended for the inhibition of TEF-5 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 TEF-5 gene expression knockdown using RT-PCR Primer: TEF-5 (h)-PR: sc-95636-PR (20 µl, 544 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Tang, Y., et al. 2016. Snail/Slug binding interactions with YAP/TAZ control skeletal stem cell self-renewal and differentiation. Nat. Cell Biol. 18: 917-929.

RESEARCH USE

For research use only, not for use in diagnostic procedures.