SANTA CRUZ BIOTECHNOLOGY, INC.

TAF II p43 siRNA (h): sc-95445

BACKGROUND

TFIID is a general transcription factor that initiates preinitiation complex assembly through direct interaction with the TATA promoter element. Functioning as a multisubunit complex consisting of a small TATA-binding polypeptide and other TBP-associated factors (TAFs), TFIID mediates promoter responses to various transcriptional activators and repressors. TAF II p43, also known as TAF8, TAFII43 or TBN, is a 310 amino acid subunit of the TFIID complex that contains one histone-fold domain. Localized to either the nucleus or the cytoplasm depending on the developmental stage of the cell, TAF II p43 plays a role in fibroblast differentiation and is thought to be required for survival of the early embryo. Ectopic expression of the histone-fold domain results in a dominant-negative mutation that prevents TAF II p43 from regulating differentiation, an event that may be detrimental to developing cells. Four isoforms of TAF II p43 exist due to alternative splicing events.

REFERENCES

1. Pendergrast, P.S., et al. 1996. Mutations in the carboxy-terminal domain of TBP affect the synthesis of human immunodeficiency virus type 1 full-length and short transcripts similarly. J. Virol. 70: 5025-5034.
2. Purrello, M., et al. 1998. Genomics and transcription analysis of human TFIID. Oncogene 16: 1633-1638.
3. Guermah, M., et al. 2001. Positive and negative TAF(II) functions that suggest a dynamic TFIID structure and elicit synergy with traps in activator-induced transcription. Mol. Cell. Biol. 21: 6882-6894.
4. Tora, L. 2002. A unified nomenclature for TATA box binding protein (TBP)-associated factors (TAFs) involved in RNA polymerase II transcription. Genes Dev. 16: 673-675.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609514. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Guermah, M., et al. 2003. The TBN protein, which is essential for early embryonic mouse development, is an inducible TAFII implicated in adipogenesis. Mol. Cell 12: 991-1001.

CHROMOSOMAL LOCATION

Genetic locus: TAF8 (human) mapping to 6p21.1.

PRODUCT

TAF II p43 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 TAF II p43 shRNA Plasmid (h): sc-95445-SH and TAF II p43 shRNA (h) Lentiviral Particles: sc-95445-V as alternate gene silencing products.

For independent verification of TAF II p43 (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-95445A, sc-95445B and sc-95445C.

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

TAF II p43 siRNA (h) is recommended for the inhibition of TAF II p43 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

TAF II p43 (B-7): sc-398062 is recommended as a control antibody for monitoring of TAF II p43 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 TAF II p43 gene expression knockdown using RT-PCR Primer: TAF II p43 (h)-PR: sc-95445-PR (20 µl, 560 bp). 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.