SANTA CRUZ BIOTECHNOLOGY, INC.

TAF II p250 siRNA (m): sc-37170

BACKGROUND

TFIID is a general transcription factor which initiates pre-initiation complex assembly through direct interaction with the TATA promoter element. It is a multi-subunit complex consisting of a small TATA-binding polypeptide and other TBP-associated factors (TAFs). Although native TFIID can mediate both activator-independent (basal) and activator-dependent transcription in reconstituted systems, TBP can mediate only basal transcription. The largest subunit (TAF) of TFIID is a protein designated TAF II p250. Of interest, TAF II p250 has been cloned and shown to be identical to CCG1, a nuclear DNA-binding protein known to be important for cell cycle progression. This part of TAF II p250 may serve a specific function in activation of a subset of genes important for cell cycle progression.

REFERENCES

1. Matsui, T., et al. 1980. Multiple factors required for accurate initiation of transcription by purified RNA polymerase II. J. Biol. Chem. 255: 11992-11996.
2. Sekiguchi, T., et al. 1988. Molecular cloning of the cDNA of human X chromosomal gene (CCG1) which complements the temperature-sensitive G_1 mutants, tsBN462 and ts13, of the BHK cell line. EMBO J. 7: 1683-1687.
3. Buratowski, S., et al. 1989. Five intermediate complexes in transcription initiation by RNA polymerase II. Cell 56: 549-561.
4. Dynlacht, B.D., et al. 1991. Isolation of co-activators associated with the TATA-binding protein that mediate transcriptional activation. Cell 66: 563-576.
5. Sekiguchi, T., et al. 1991. The human CCG1 gene, essential for progression of the G_1 phase, encodes a 210-kilodalton nuclear DNA-binding protein. Mol. Cell. Biol. 11: 3317-3325.
6. Takada, R., et al. 1992. Identification of human TFIID components and direct interaction between a 250-kDa polypeptide and the TATA box-binding protein (TFIID τ). Proc. Natl. Acad. Sci. USA 89: 11809-11813.
7. Ruppert, S., et al. 1993. Cloning and expression of human TAFII250: a TBP-associated factor implicated in cell-cycle regulation. Nature 362: 175-179.
8. Hisatake, K., et al. 1993. The p250 subunit of native TATA box-binding factor TFIID is the cell-cycle regulatory protein CCG1. Nature 362: 179-181.

CHROMOSOMAL LOCATION

Genetic locus: Taf1 (mouse) mapping to X D.

PRODUCT

TAF II p250 siRNA (m) 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 p250 shRNA Plasmid (m): sc-37170-SH and TAF II p250 shRNA (m) Lentiviral Particles: sc-37170-V as alternate gene silencing products.

For independent verification of TAF II p250 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-37170A, sc-37170B and sc-37170C.

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 p250 siRNA (m) is recommended for the inhibition of TAF II p250 expression in mouse 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 p250 (A-10): sc-393981 is recommended as a control antibody for monitoring of TAF II p250 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 p250 gene expression knockdown using RT-PCR Primer: TAF II p250 (m)-PR: sc-37170-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.

PROTOCOLS

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