SANTA CRUZ BIOTECHNOLOGY, INC.

TAF II p55 siRNA (m): sc-76628

BACKGROUND

TFIID is a general transcription factor that facilitates the preinitiation complex assembly through direct interactions with the TATA promoter element. A multisubunit complex, TFIID consists of a small TATA-binding polypeptide and several TBP-associated factors (TAFs). TAF II p55 (transcription initiation factor TFIID 55 kDa subunit), also known as TAF7, TAF2F or TAFII55, is a ubiquitously expressed 349 amino acid component of the TFIID complex. Localized to the nucleus, TAF II p55 interacts directly with the largest subunit of the TFIID complex (TAF II p250), as well as with multiple proteins involved in transcriptional activation. Through these interactions, TAF II p55 inhibits the acetyltransferase activity of its binding partners (such as TAF II p250), thereby suppressing their abiltity to stimulate transcription. TAF II p55 is, therefore, thought to act as a checkpoint regulator that delays transcription until the preinitiation complex is fully assembled.

REFERENCES

1. Chiang, C.M. and Roeder, R.G. 1995. Cloning of an intrinsic human TFIID subunit that interacts with multiple transcriptional activators. Science 267: 531-536.
2. Lavigne, A.C., et al. 1996. Multiple interactions between hTAFII55 and other TFIID subunits. Requirements for the formation of stable ternary complexes between hTAFII55 and the TATA-binding protein. J. Biol. Chem. 271: 19774-19780.
3. Gegonne, A., et al. 2001. TAFII55 binding to TAFII250 inhibits its acetyltransferase activity. Proc. Natl. Acad. Sci. USA 98: 12432-12437.
4. Zhou, T. and Chiang, C.M. 2001. The intronless and TATA-less human TAF(II)55 gene contains a functional initiator and a downstream promoter element. J. Biol. Chem. 276: 25503-25511.
5. Munz, C., et al. 2003. TAF7 (TAFII55) plays a role in the transcription activation by c-Jun. J. Biol. Chem. 278: 21510-21516.
6. Fukuchi, J., et al. 2004. TATA-binding protein-associated factor 7 regulates polyamine transport activity and polyamine analog-induced apoptosis. J. Biol. Chem. 279: 29921-29929.

CHROMOSOMAL LOCATION

Genetic locus: Taf7 (mouse) mapping to 18 B3.

PRODUCT

TAF II p55 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 p55 shRNA Plasmid (m): sc-76628-SH and TAF II p55 shRNA (m) Lentiviral Particles: sc-76628-V as alternate gene silencing products.

For independent verification of TAF II p55 (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-76628A, sc-76628B and sc-76628C.

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 p55 siRNA (m) is recommended for the inhibition of TAF II p55 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 p55 (SQ-8): sc-101167 is recommended as a control antibody for monitoring of TAF II p55 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 p55 gene expression knockdown using RT-PCR Primer: TAF II p55 (m)-PR: sc-76628-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.