SANTA CRUZ BIOTECHNOLOGY, INC.

TAF II p135 siRNA (m): sc-154046

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 p135, also known as TAF4, TAF2C, TAF2C1, TAF4A or TAFII130, is a 1,085 amino acid subunit of TFIID that accelerates transcriptional activation triggered by thyroid hormone (TR) or retinoic acid (RA). Localized to the nucleus, TAF II p135 contains one TAFH domain and is thought to bind to proteins that contain glutamine-rich domains, such as the transcription factor CREB. Via its binding to glutamine-rich proteins, TAF II p135 may be associated with neurodegenerative poly-glutamine diseases, such as DRPLA (dentatorubropallidoluysian atrophy), HD (Huntington's disease) and SCA (spinocerebellar ataxia).

REFERENCES

1. Werten, S., et al. 2002. Crystal structure of a subcomplex of human transcription factor TFIID formed by TATA binding protein-associated factors hTAF4 (hTAF(II)135) and hTAF12 (hTAF(II)20). J. Biol. Chem. 277: 45502-45509.
2. Vassallo, M.F. and Tanese, N. 2002. Isoform-specific interaction of HP1 with human TAFII130. Proc. Natl. Acad. Sci. USA 99: 5919-5924.
3. Dunah, A.W., et al. 2002. Sp1 and TAFII130 transcriptional activity disrupted in early Huntington's disease. Science 296: 2238-2243.
4. Pointud, J.C., et al. 2003. The intracellular localisation of TAF7L, a paralogue of transcription factor TFIID subunit TAF7, is developmentally regulated during male germ-cell differentiation. J. Cell Sci. 116: 1847-1858.
5. 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.
6. Cavusoglu, N., et al. 2003. Novel subunits of the TATA binding protein free TAFII-containing transcription complex identified by matrix-assisted laser desorption/ionization-time of flight mass spectrometry following one-dimensional gel electrophoresis. Proteomics 3: 217-223.

CHROMOSOMAL LOCATION

Genetic locus: Taf4a (mouse) mapping to 2 H4.

PRODUCT

TAF II p135 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 p135 shRNA Plasmid (m): sc-154046-SH and TAF II p135 shRNA (m) Lentiviral Particles: sc-154046-V as alternate gene silencing products.

For independent verification of TAF II p135 (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-154046A, sc-154046B and sc-154046C.

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 p135 siRNA (m) is recommended for the inhibition of TAF II p135 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 p135 (22): sc-136093 is recommended as a control antibody for monitoring of TAF II p135 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 p135 gene expression knockdown using RT-PCR Primer: TAF II p135 (m)-PR: sc-154046-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.