

TAF II p68 siRNA (h): sc-94009

BACKGROUND

TFIID is a general transcription factor which initiates preinitiation complex assembly through direct interaction with the TATA promoter element. It is a multisubunit complex consisting of a small TATA-binding polypeptide and other TBP-associated factors (TAFs). TAF II p68, also known as TAF15, RBP56 or TAF2N, is a member of the RNA polymerase II multiprotein complex and is present in certain TFIID subcomplexes. Expressed throughout the body, TAF II p68 is a single-stranded RNA binding protein that shares homology with TLS (translocated in liposarcoma) and EWS (Ewing's sarcoma), both of which are proto-oncogenes. Fusion of TAF II p68 with certain transcription factors transforms it into an oncoprotein with oncogenic potential at the N-terminus. When, for example, TAF II p68 is fused with TEC (translocated in extraskeletal chondrosarcoma), the fusion pair acts as an oncoprotein in which TAF II p68 is the transactivation domain. Defects in the gene encoding TAF II p68 are associated with extraskeletal myxoid chondrosarcoma, a malignant soft tumor.

REFERENCES

1. Bertolotti, A., Lutz, Y., Heard, D.J., Chambon, P. and Tora, L. 1996. hTAF II 68, a novel RNA/ssDNA-binding protein with homology to the pro-oncoproteins TLS/FUS and EWS is associated with both TFIID and RNA polymerase II. *EMBO J.* 15: 5022-5031.
2. Morohoshi, F., Ootsuka, Y., Arai, K., Ichikawa, H., Mitani, S., Munakata, N. and Ohki, M. 1998. Genomic structure of the human RBP56/hTAF II 68 and FUS/TLS genes. *Gene* 221: 191-198.
3. Panagopoulos, I., Mencinger, M., Dietrich, C.U., Bjerkehaugen, B., Saeter, G., Mertens, F., Mandahl, N. and Heim, S. 2000. Fusion of the RBP56 and CHN genes in extraskeletal myxoid chondrosarcomas with translocation t(9;17)(q22;q11). *Oncogene* 18: 7594-7598.
4. Bertolotti, A., Bell, B. and Tora, L. 2000. The N-terminal domain of human TAF II 68 displays transactivation and oncogenic properties. *Oncogene* 18: 8000-8010.
5. Martini, A., La Starza, R., Janssen, H., Bilhou-Nabera, C., Corveleyn, A., Somers, R., Aventin, A., Foà, R., Hagemeijer, A., Mecucci, C. and Marynen, P. 2002. Recurrent rearrangement of the Ewing's sarcoma gene, EWSR1, or its homologue, TAF15, with the transcription factor CIZ/NMP4 in acute leukemia. *Cancer Res.* 62: 5408-5412.

CHROMOSOMAL LOCATION

Genetic locus: TAF15 (human) mapping to 17q12.

PRODUCT

TAF II p68 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TAF II p68 shRNA Plasmid (h): sc-94009-SH and TAF II p68 shRNA (h) Lentiviral Particles: sc-94009-V as alternate gene silencing products.

For independent verification of TAF II p68 (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-94009A, sc-94009B and sc-94009C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

TAF II p68 siRNA (h) is recommended for the inhibition of TAF II p68 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 μ M in 66 μ l. 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 p68 (TAF15B11A6): sc-81121 is recommended as a control antibody for monitoring of TAF II p68 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TAF II p68 gene expression knockdown using RT-PCR Primer: TAF II p68 (h)-PR: sc-94009-PR (20 μ l, 596 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.