SANTA CRUZ BIOTECHNOLOGY, INC.

TAF I p48 siRNA (m): sc-38487

BACKGROUND

For gene transcription governed by RNA polymerase I, the human transcription factor SL1 (mouse TIF-IB) directs the assembly of initiation complexes at the prompter. Like TFIID, which directs transcription by RNA polymerase II, SL1/TIF-IB contains the TATA-binding protein (TBP) and a set of TBP-associated factors (TAFs). The three TAF I subunits, hTAF I p110, hTAF I p63 and hTAF p48 (or mouse TAF I p95, TAF I p68 and TAF I p48) are all integral components of SL1/TIF-IB. The mutually exclusive binding of either TAF I or TAF II subunits to TBP is believed to direct the formation of promoter- and RNA polymerase-specific complexes.

REFERENCES

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2. Clos, J., et al. 1986. A purified transcription factor (TIF-IB) binds to essential sequences of the mouse rDNA promoter. Proc. Natl. Acad. Sci. USA 83: 604-608.
3. Bell, S.P., et al. 1990. Assembly of alternative multiprotein complexes directs rRNA promoter selectivity. Genes Dev. 4: 943-954.
4. Comai, L., et al. 1992. The TATA-binding protein and associated factors are integral components of the RNA polymerase I transcription factor, SL1. Cell 68: 965-976.
5. Eberhard, D., et al. 1993. A TBP-containing multiprotein complex (TIF-IB) mediates transcription specificity of murine RNA polymerase I. Nucleic Acids Res. 21: 4180-4186.
6. Comai, L., et al. 1994. Reconstitution of transcription factor SL1: exclusive binding of TBP by SL1 or TFIID subunits. Science 266: 1966-1972.
7. Zomerdijk, J.C., et al. 1994. Assembly of transcriptionally active RNA polymerase I initiation factor SL1 from recombinant subunits. Science 266: 2015-2018.
8. Heix, J., et al. 1997. Cloning of murine RNA polymerase 1-specific TAF factors: conserved interactions between the subunits of the species-specific transcription initiation factor TIF-IB/SL1. Proc. Natl. Acad. Sci. USA 94: 1733-1738.

CHROMOSOMAL LOCATION

Genetic locus: Taf1a (mouse) mapping to 1.

PRODUCT

TAF I p48 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 I p48 shRNA Plasmid (m): sc-38487-SH and TAF I p48 shRNA (m) Lentiviral Particles: sc-38487-V as alternate gene silencing products.

For independent verification of TAF I p48 (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-38487A, sc-38487B and sc-38487C.

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 I p48 siRNA (m) is recommended for the inhibition of TAF I p48 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 I p48 (A-10): sc-393600 is recommended as a control antibody for monitoring of TAF I p48 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 I p48 gene expression knockdown using RT-PCR Primer: TAF I p48 (m)-PR: sc-38487-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.