SANTA CRUZ BIOTECHNOLOGY, INC.

TIP120A siRNA (h): sc-37174

BACKGROUND

TATA-binding protein (TBP) forms complexes with various nuclear proteins and is a target for various transcriptional regulators, such as TIP120. The two members of the TIP120 family of proteins, TIP120A and TIP120B, are TBP-Interacting Proteins that function as global activators in transcriptional regulation. TIP120A is a ubiqitously expressed protein isolated from rat liver nuclear extracts, originally named TIP120. TIP120B is a TIP120A-like protein that is expressed specifically in muscle tissues. TIP120A binds directly to TBP and a particular subunit of RNA polymerases (RNAP) to facilitate specific integration of RNAP II into the preinitiation complex (PIC). In addition to being a transcription factor of TBP, the chaperone-like activity toward the RNA polymerases demonstrates that TIP120 regulates the amplification of multiple gene expression.

REFERENCES

1. Zawel, L., et al. 1992. Advances in RNA polymerase II transcription. Curr. Opin. Cell Biol. 4: 488-495.
2. Conaway, R.C., et al. 1993. General initiation factors for RNA polymerase II. Annu. Rev. Biochem. 62: 161-190.
3. Yogosawa, S., et al. 1996. Molecular cloning of a novel 120-kDa TBP-interacting protein. Biochem. Biophys. Res. Commun. 229: 612-617.
4. Roeder, R.G. 1996. The role of general initiation factors in transcription by RNA polymerase II. Trends Biochem. Sci. 21: 327-335.
5. Makino, Y., et al. 1999. TATA-binding protein-interacting protein 120, TIP120, stimulates three classes of eukaryotic transcription via a unique mechanism. Mol. Cell. Biol. 19: 7951-7960.
6. Aoki, T., et al. 1999. TIP120B: a novel TIP120-family protein that is expressed specifically in muscle tissues. Biochem. Biophys. Res. Commun. 261: 911-916.

CHROMOSOMAL LOCATION

Genetic locus: CAND1 (human) mapping to 12q14.3.

PRODUCT

TIP120A 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see TIP120A shRNA Plasmid (h): sc-37174-SH and TIP120A shRNA (h) Lentiviral Particles: sc-37174-V as alternate gene silencing products.

For independent verification of TIP120A (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-37174A, sc-37174B and sc-37174C.

PROTOCOLS

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

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

TIP120A siRNA (h) is recommended for the inhibition of TIP120A 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 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

TIP120A (G-3): sc-137055 is recommended as a control antibody for monitoring of TIP120A 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 TIP120A gene expression knockdown using RT-PCR Primer: TIP120A (h)-PR: sc-37174-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.