

TBPL2 siRNA (m): sc-154123

BACKGROUND

TATA box-binding protein-like protein 2 (TBPL2), also known as TATA box-binding protein-related factor 3 (TRF3), is a 350 amino acid protein belonging to the TBP family. Like most TBP family members, TBPL2 has a virtually identical C-terminal region to TBP, but is divergent in the N-terminus. TBPL2 acts as a transcription factor that forms a complex with TAF II p140 during the differentiation of myoblasts into myocytes. During an early stage in the differentiation process, the TBPL2/TAF II p140 complex replaces TFIID at specific promoters. Localized to the nucleus, as well as the cytoplasm during cyto-kenesis, TBPL2 is found in myofibers and myotubes. TBPL2 has highest expression in lung, ovary, heart, uterus, placenta and liver.

REFERENCES

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2. Yang, Y., et al. 2006. Regulated expression of TATA-binding protein-related factor 3 (TRF3) during early embryogenesis. *Cell Res.* 16: 610-621.
3. Tanaka, Y., et al. 2007. Transcriptional repression of the mouse *wee1* gene by TBP-related factor 2. *Biochem. Biophys. Res. Commun.* 352: 21-28.
4. Di Pietro, C., et al. 2007. Genomics, evolution, and expression of TBPL2, a member of the TBP family. *DNA Cell Biol.* 26: 369-385.
5. Deato, M.D. and Tjian, R. 2007. Switching of the core transcription machinery during myogenesis. *Genes Dev.* 21: 2137-2149.
6. Gazdag, E., et al. 2007. Analysis of TATA-binding protein 2 (TBP2) and TBP expression suggests different roles for the two proteins in regulation of gene expression during oogenesis and early mouse development. *Reproduction* 134: 51-62.
7. Deato, M.D., et al. 2008. MyoD targets TAF3/TRF3 to activate myogenin transcription. *Mol. Cell* 32: 96-105.

CHROMOSOMAL LOCATION

Genetic locus: *Tbpl2* (mouse) mapping to 2 A3.

PRODUCT

TBPL2 siRNA (m) is a pool of 2 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 TBPL2 shRNA Plasmid (m): sc-154123-SH and TBPL2 shRNA (m) Lentiviral Particles: sc-154123-V as alternate gene silencing products.

For independent verification of TBPL2 (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-154123A and sc-154123B.

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 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

TBPL2 siRNA (m) is recommended for the inhibition of TBPL2 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor TBPL2 gene expression knockdown using RT-PCR Primer: TBPL2 (m)-PR: sc-154123-PR (20 μ l). 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.