

THAP11 siRNA (m): sc-154245

BACKGROUND

Members of the THAP (thanatos-associated protein) family of proteins contain a well conserved DNA-binding domain known as the THAP-type zinc finger motif. Proteins containing the THAP-type zinc finger motif are commonly involved in transcriptional regulation, cell-cycle control, apoptosis and chromatin modification. The THAP-type zinc finger domain is suggested to have similarities with the site-specific DNA-binding domain (DBD) of *Drosophila* P element transposase. THAP11 (THAP domain containing 11), also known as HRIHFB2206, is a 314 amino acid protein that belongs to the THAP11 family and contains one THAP-type zinc finger. Localizing to the nucleus and cytoplasm, THAP11 may act as a transcriptional repressor, playing a role in embryogenesis and pluripotency of embryonic stem cells by recruiting epigenetic modifiers. THAP11 interacts with HCF1 via a coiled coil domain.

REFERENCES

1. Roussigne, M., et al. 2003. THAP1 is a nuclear proapoptotic factor that links prostate-apoptosis-response-4 (Par-4) to PML nuclear bodies. *Oncogene* 22: 2432-2442.
2. Roussigne, M., et al. 2003. The THAP domain: a novel protein motif with similarity to the DNA-binding domain of P element transposase. *Trends Biochem. Sci.* 28: 66-69.
3. Pandey, N., et al. 2004. SMARCA2 and THAP11: potential candidates for polyglutamine disorders as evidenced from polymorphism and protein-folding simulation studies. *J. Hum. Genet.* 49: 596-602.
4. Macfarlan, T., et al. 2005. Human THAP7 is a chromatin-associated, histone tail-binding protein that represses transcription via recruitment of HDAC3 and nuclear hormone receptor corepressor. *J. Biol. Chem.* 280: 7346-7358.
5. Liew, C.K., et al. 2007. Solution structure of the THAP domain from *Caenorhabditis elegans* C-terminal binding protein (CtBP). *J. Mol. Biol.* 366: 382-390.
6. Dejosez, M., et al. 2008. Ronin is essential for embryogenesis and the pluripotency of mouse embryonic stem cells. *Cell* 133: 1162-1174.

CHROMOSOMAL LOCATION

Genetic locus: Thap11 (mouse) mapping to 8 D3.

PRODUCT

THAP11 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see THAP11 shRNA Plasmid (m): sc-154245-SH and THAP11 shRNA (m) Lentiviral Particles: sc-154245-V as alternate gene silencing products.

For independent verification of THAP11 (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-154245A, sc-154245B and sc-154245C.

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

THAP11 siRNA (m) is recommended for the inhibition of THAP11 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.

GENE EXPRESSION MONITORING

THAP11 (364CT25.4.2): sc-517366 is recommended as a control antibody for monitoring of THAP11 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 THAP11 gene expression knockdown using RT-PCR Primer: THAP11 (m)-PR: sc-154245-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.

PROTOCOLS

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