

PRDM4 siRNA (m): sc-153238

BACKGROUND

The positive regulatory (PR) domain defines a family of zinc-finger transcription factors involved in cell differentiation and tumorigenesis. One member of the PR domain family is PRDM4, a protein that is differentially controlled by neurotrophin and serum conditions. PRDM4 is characterized by an internal PR domain and six carboxy-terminal zinc finger motifs. PRDM4 interacts with the p75 neurotrophin receptor and is redistributed from the cytoplasm to the nucleus following NGF treatment of transfected cells, suggesting that PRDM4 may provide a downstream transducer for the effects of NGF through the p75 neurotrophin receptor. Under normal growth conditions, PRDM4 is predominantly found in the cytoplasm; however, upon serum-starvation, PRDM4 also translocates into the nucleus. The gene encoding human PRDM4 maps to chromosome 12q23-q24.1, a region involved in harboring tumor suppressor genes, suggesting a role for PRDM4 in events associated with growth arrest.

REFERENCES

1. Yang, X.H. and Huang, S. 1999. PFM1 (PRDM4), a new member of the PR-domain family, maps to a tumor suppressor locus on human chromosome 12q23-q24.1. *Genomics* 61: 319-325.
2. Chittka, A. and Chao, M.V. 1999. Identification of a zinc finger protein whose subcellular distribution is regulated by serum and nerve growth factor. *Proc. Natl. Acad. Sci. USA* 96: 10705-10710.
3. Ren, B., Chee, K.J., Kim, T.H. and Maniatis, T. 1999. PRDI-BF1/Blimp-1 repression is mediated by corepressors of the Groucho family of proteins. *Genes Dev.* 13: 125-137.
4. Buyse, I.M., Shao, G. and Huang, S. 1995. The retinoblastoma protein binds to RIZ, a zinc-finger protein that shares an epitope with the adenovirus E1A protein. *Proc. Natl. Acad. Sci. USA* 92: 4467-4471.
5. LocusLink Report (LocusID: 11108). <http://www.ncbi.nlm.nih.gov/LocusLink>.

CHROMOSOMAL LOCATION

Genetic locus: Prdm4 (mouse) mapping to 10 C1.

PRODUCT

PRDM4 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 PRDM4 shRNA Plasmid (m): sc-153238-SH and PRDM4 shRNA (m) Lentiviral Particles: sc-153238-V as alternate gene silencing products.

For independent verification of PRDM4 (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-153238A, sc-153238B and sc-153238C.

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

PRDM4 siRNA (m) is recommended for the inhibition of PRDM4 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 PRDM4 gene expression knockdown using RT-PCR Primer: PRDM4 (m)-PR: sc-153238-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.