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PRDM14 siRNA (m): sc-152448

BACKGROUND

The PR-domain containing proteins (PRDMs) have a common involvement in the modulation of gene activities. A PR-domain family member usually produces two products, called PR-plus and PR-minus, which differ by the presence or absence of the PR domain, respectively. The PR-plus product is underexpressed or disrupted in cancer cells, whereas the PR-minus product is present or overexpressed in cancer cells. This imbalance in the amount of the two products, which is a result of either genetic or epigenetic events, appears to be a determining factor of malignancy. PRDM14 (PR domain-containing protein 14), also known as PFM11, is a 571 amino acid protein belonging to the PRDM family. Localizing to the nucleus, PRDM14 contains six C₂H₂-type zinc fingers and one SET domain. It is believed to participate in transcriptional regulation and may be involved in cell differentiation and tumorigenesis.

REFERENCES

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3. Jiang, G.L. and Huang, S. 2000. The yin-yang of PR-domain family genes in tumorigenesis. *Histol. Histopathol.* 15: 109-117.
4. Strausberg, R.L., et al. 2002. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. *Proc. Natl. Acad. Sci. USA* 99: 16899-16903.
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CHROMOSOMAL LOCATION

Genetic locus: Prdm14 (mouse) mapping to 1 A3.

RODUCT

PRDM14 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 PRDM14 shRNA Plasmid (m): sc-152448-SH and PRDM14 shRNA (m) Lentiviral Particles: sc-152448-V as alternate gene silencing products.

For independent verification of PRDM14 (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-152448A, sc-152448B and sc-152448C.

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

PRDM14 siRNA (m) is recommended for the inhibition of PRDM14 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 PRDM14 gene expression knockdown using RT-PCR Primer: PRDM14 (m)-PR: sc-152448-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.