

Peg10 siRNA (m): sc-152158

BACKGROUND

Peg10 (paternally expressed gene 10), also known as EDR, KIAA1051, MAR2, MART2, MEF3L1 or RGAG3, is a 708 amino acid protein that localizes to both the nucleus and cytoplasm and contains one CCHC-type zinc finger. Expressed in placenta, brain, kidney, liver, thymus, lung, ovary and spleen, Peg10 plays a role in cell growth promotion and apoptosis prevention and is, therefore, thought to be a potent factor in tumor formation and metastasis. Peg10 exists as two distinct isoforms, designated RF1 and RF1/RF2, which have distinctive active sites, but are both associated with cell growth and differentiation control. The gene encoding Peg10 maps to human chromosome 7q21.3, which houses over 1,000 genes and comprises nearly 5% of the human genome. Defects in some of the genes localized to chromosome 7 have been linked to osteogenesis imperfecta, Williams-Beuren syndrome, Pendred syndrome, lissencephaly, citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

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7. Clark, M.B., et al. 2007. Mammalian gene PEG10 expresses two reading frames by high efficiency -1 frameshifting in embryonic-associated tissues. *J. Biol. Chem.* 282: 37359-37369.
8. Jie, X., et al. 2007. Androgen activates PEG10 to promote carcinogenesis in hepatic cancer cells. *Oncogene* 26: 5741-5751.
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CHROMOSOMAL LOCATION

Genetic locus: Peg10 (mouse) mapping to 6 A1.

PROTOCOLS

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

PRODUCT

Peg10 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 Peg10 shRNA Plasmid (m): sc-152158-SH and Peg10 shRNA (m) Lentiviral Particles: sc-152158-V as alternate gene silencing products.

For independent verification of Peg10 (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-152158A, sc-152158B and sc-152158C.

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

Peg10 siRNA (m) is recommended for the inhibition of Peg10 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 Peg10 gene expression knockdown using RT-PCR Primer: Peg10 (m)-PR: sc-152158-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.