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MIPOL1 siRNA (m): sc-149439

BACKGROUND

MIPOL1 (mirror-image polydactyly gene 1 protein) is a 442 amino acid protein that is expressed very weakly in skeletal muscle, heart, pancreas, kidney, liver and fetal kidney. Defects in the gene encoding MIPOL1 cause mirror-image polydactyly of hands and feet, a congenital anomaly that is characterized by mirror image duplication of digits. The MIPOL gene has also been implicated in a translocation event in which it rearranges with the PITX2 gene, resulting in a phenotype of mild craniofacial and acallosal central nervous system mid-line defects. Down-regulation of MIPOL1 expression is observed in a high percentage of nasopharyngeal carcinomas, suggesting that MIPOL1 is a tumor suppressor. There are three isoforms of MIPOL1 that are expressed as a result of alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Mipol1 (mouse) mapping to 12 C1.

PRODUCT

MIPOL1 siRNA (m) is a target-specific 19-25 nt siRNA 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 MIPOL1 shRNA Plasmid (m): sc-149439-SH and MIPOL1 shRNA (m) Lentiviral Particles: sc-149439-V as alternate gene silencing products.

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

MIPOL1 siRNA (m) is recommended for the inhibition of MIPOL1 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 MIPOL1 gene expression knockdown using RT-PCR Primer: MIPOL1 (m)-PR: sc-149439-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.