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RPAIN siRNA (m): sc-153096

BACKGROUND

RPAIN (RPA interacting protein), also known as HRIP or RIP, is a 219 amino acid protein that assists in importing the RPA complex into the nucleus by interacting with karyopherin β 1. RPAIN is widely expressed and is found in various tissues including thymus, spleen, pancreas, muscle, liver, prostate, testis, ovary, brain, heart, colon and intestine. RPAIN exists as seven alternatively spliced isoforms and is encoded by a gene that maps to human chromosome 17p13.2. Chromosome 17 comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, and is linked to predisposition of cancers of the ovary, colon, prostate gland and fallopian tubes.

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CHROMOSOMAL LOCATION

Genetic locus: Rpain (mouse) mapping to 11 B4.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PRODUCT

RPAIN 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 RPAIN shRNA Plasmid (m): sc-153096-SH and RPAIN shRNA (m) Lentiviral Particles: sc-153096-V as alternate gene silencing products.

For independent verification of RPAIN (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-153096A, sc-153096B and sc-153096C.

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

RPAIN siRNA (m) is recommended for the inhibition of RPAIN 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 RPAIN gene expression knockdown using RT-PCR Primer: RPAIN (m)-PR: sc-153096-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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