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HEI-C siRNA (m): sc-145932

BACKGROUND

Mitosis is an important process regulated by many proteins. In the event that cellular division is not controlled, cancer, tumors and cellular death become prevalent. HEI-C (enhancer of invasion-cluster) is also known as CCDC5 (coiled-coil domain containing 5 (spindle associated)) and is a 278 amino acid protein expressed as two isoforms. HEI-C is expressed in a variety of tissues including pancreas, kidney, skeletal muscle, liver and heart, where it is localized to the cytoplasm during phases of the cell cycle, excluding mitosis. HEI-C is localized to asters, and is spotted on the microtubule array during metaphase. During the later stages of mitosis, HEI-C remains only on the spindle, then associates with microtubule bundles central to the midbody of the cell. During the metaphase-anaphase transition of mitosis, HEI-C regulates the function and stability of the mitotic spindle. Depletion of HEI-C results in cell death or mitotic delay between metaphase and anaphase, suggesting the importance of functional HEI-C proteins.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Haus1 (mouse) mapping to 18 E3.

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.

PRODUCT

HEI-C 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 HEI-C shRNA Plasmid (m): sc-145932-SH and HEI-C shRNA (m) Lentiviral Particles: sc-145932-V as alternate gene silencing products.

For independent verification of HEI-C (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-145932A, sc-145932B and sc-145932C.

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

HEI-C siRNA (m) is recommended for the inhibition of HEI-C 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 HEI-C gene expression knockdown using RT-PCR Primer: HEI-C (m)-PR: sc-145932-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.