SANTA CRUZ BIOTECHNOLOGY, INC.

HEI10 siRNA (m): sc-75239

BACKGROUND

Ubiquitination is an important mechanism through which three classes of enzymes act in concert to target short-lived or abnormal proteins for destruction. The three classes of enzymes involved in ubiquitination are the ubiquitin-activating enzymes (E1s), the ubiquitin-conjugating enzymes (E2s) and the ubiquitin-protein ligases (E3s). HEI10 (human enhancer of invasion 10), also known as CCNB1IP1 (cyclin B1 interacting protein 1), is a 277 amino acid protein that localizes to the nucleus and contains one RING-type zinc finger. Expressed at high levels in heart and present at lower levels in kidney, liver, brain, lung and placenta, HEI10 functions as an E3 ubiquitin-protein ligase that modulates cyclin B levels and plays an important role in proper cell cycle progression. HEI10 is subject to post-translational modification, including ubiquitination and phosphorylation.

REFERENCES

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3. Online Mendelian Inheritance in Man, OMIM™. 2004. Johns Hopkins University, Baltimore, MD. MIM Number: 608249. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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5. Singh, M.K., Nicolas, E., Gherraby, W., Dadke, D., Lessin, S. and Golemis, E.A. 2007. HEI10 negatively regulates cell invasion by inhibiting cyclin B/Cdk1 and other promotility proteins. Oncogene 26: 4825-4832.
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CHROMOSOMAL LOCATION

Genetic locus: Ccnb1ip1 (mouse) mapping to 14 C1.

PRODUCT

HEI10 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see HEI10 shRNA Plasmid (m): sc-75239-SH and HEI10 shRNA (m) Lentiviral Particles: sc-75239-V as alternate gene silencing products.

For independent verification of HEI10 (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-75239A, sc-75239B and sc-75239C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

HEI10 siRNA (m) is recommended for the inhibition of HEI10 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 µM in 66 µl. 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 HEI10 gene expression knockdown using RT-PCR Primer: HEI10 (m)-PR: sc-75239-PR (20 µl). 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.