SANTA CRUZ BIOTECHNOLOGY, INC.

HES7 siRNA (h): sc-75247

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The Power to Question

BACKGROUND

Hairy and enhancer of split 7 (HES7) is a 225 amino acid transcriptional repressor protein. Localized to the nucleus, HES7 represses transcription of N box- and E box-containing promoters. HES7, along with family member HES1, is thought to cooperatively regulate somite formation in the presomitic mesoderm. HES7 may also be essential for coordinated somite segmentation by acting as a segmentation clock. HES7 contains one basic helix-loop-helix (bHLH) domain and one Orange domain. Mutations in HES7 have been found to cause spondylocostal dysostosis, an autosomal recessive disorder characterized by deformities of the chest and spine.

REFERENCES

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4. Zhu, H., et al. 2006. Transient block of receptor may be a mechanism controlling unidirectional propagation of signaling. IEEE Trans. Nanobioscience 5: 193-203.
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8. Sparrow, D.B., et al. 2008. Mutation of Hairy-and-Enhancer-of-Split-7 in humans causes spondylocostal dysostosis. Hum. Mol. Genet. 17: 3761-3766.

CHROMOSOMAL LOCATION

Genetic locus: HES7 (human) mapping to 17p13.1.

PRODUCT

HES7 siRNA (h) is a pool of 2 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 HES7 shRNA Plasmid (h): sc-75247-SH and HES7 shRNA (h) Lentiviral Particles: sc-75247-V as alternate gene silencing products.

For independent verification of HES7 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-75247A and sc-75247B.

RESEARCH USE

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

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

HES7 siRNA (h) is recommended for the inhibition of HES7 expression in human 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 HES7 gene expression knockdown using RT-PCR Primer: HES7 (h)-PR: sc-75247-PR (20 µl). 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.