SANTA CRUZ BIOTECHNOLOGY, INC.

HRC siRNA (m): sc-146079

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The Power to Question

BACKGROUND

HRC (histidine rich calcium binding protein), also known as sarcoplasmic reticulum histidine-rich calcium-binding protein or HCP, is a 699 amino acid that binds low-density lipoprotein with high affinity. As a high capacity calcium binding protein, HRC regulates the sequestration and release of calcium in the lumen of the junctional sarcoplasmic reticulum (SR) of cardiac, skeletal and smooth muscle. This mechanism may involve direct interaction between HRC and the cytoplasmic domain of Triadin, an integral membrane protein of the SR. The gene encoding HRC maps to human chromosome 19q13.33 and mouse chromosome 7 B4.

REFERENCES

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4. Sacchetto, R., et al. 2001. Ca^{2+}-dependent interaction of triadin with histidine-rich Ca^{2+}-binding protein carboxyl-terminal region. Biochem. Biophys. Res. Commun. 289: 1125-1134.
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7. Anderson, J.P., et al. 2004. HRC is a direct transcriptional target of MEF2 during cardiac, skeletal, and arterial smooth muscle development *in vivo*. Mol. Cell. Biol. 24: 3757-3768.
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CHROMOSOMAL LOCATION

Genetic locus: Hrc (mouse) mapping to 7 B4.

PRODUCT

HRC siRNA (m) 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 HRC shRNA Plasmid (m): sc-146079-SH and HRC shRNA (m) Lentiviral Particles: sc-146079-V as alternate gene silencing products.

For independent verification of HRC (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-146079A and sc-146079B.

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

HRC siRNA (m) is recommended for the inhibition of HRC 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 HRC gene expression knockdown using RT-PCR Primer: HRC (m)-PR: sc-146079-PR (20 µl, 427 bp). 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.