SANTA CRUZ BIOTECHNOLOGY, INC.

HIRIP3 siRNA (h): sc-93460

BACKGROUND

The HIRIP3 (HIRA interacting protein 3) locus encodes for a 556 amino acid protein that directly interacts with the HIRA histone chaperone. It also interacts weakly with core histones, Histone H2B and Histone H3. HIRIP3 is a heavily phosphorylated nuclear protein and it is found throughout the cell cycle. It is phosphorylated by casein kinase II. HIRIP3 may play a role in chromatin function and histone metabolism. A region (approximately 60 amino acids in length) at the C-terminus of HIRIP3 is highly conserved among vertebrates and it contains residues that are invariantly charged, polar, and hydrophobic. Two isoforms of HIRIP3 exists due to alternative splicing. Isoform 1 is predominately expressed in skeletal muscles and isoform 2 is expressed in the liver and the heart. Human HIRA homologs are thought to be responsible for the DiGeorge syndrome and related developmental disorders.

REFERENCES

1. Lorain, S., et al. 1998. Core histones and HIRIP3, a novel histone-binding protein, directly interact with WD repeat protein HIRA. Mol. Cell. Biol. 18: 5546-5556.
2. Magnaghi, P., et al. 1998. HIRA, a mammalian homologue of *Saccharomyces cerevisiae* transcriptional co-repressors, interacts with Pax3. Nat. Genet. 20: 74-77.
3. Online Mendelian Inheritance in Man, OMIM. 1998. John Hopkins University, Baltimore, MD. MIM Number: 603365. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Lorain, S., et al. 2001. Identification of human and mouse HIRA-interacting protein-5 (HIRIP5), two mammalian representatives in a family of phylogenetically conserved proteins with a role in the biogenesis of Fe/S proteins. Biochim. Biophys. Acta 1517: 376-383.
5. Ahmad, A., et al. 2005. Different roles of N-terminal and C-terminal halves of HIRA in transcription regulation of cell cycle-related genes that contribute to control of vertebrate cell growth. J. Biol. Chem. 280: 32090-32100.
6. Frith, M.C., et al. 2006. Evolutionary turnover of mammalian transcription start sites. Genome Res. 16: 713-722.

CHROMOSOMAL LOCATION

Genetic locus: HIRIP3 (human) mapping to 16p11.2.

PRODUCT

HIRIP3 siRNA (h) 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 HIRIP3 shRNA Plasmid (h): sc-93460-SH and HIRIP3 shRNA (h) Lentiviral Particles: sc-93460-V as alternate gene silencing products.

For independent verification of HIRIP3 (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-93460A, sc-93460B and sc-93460C.

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

HIRIP3 siRNA (h) is recommended for the inhibition of HIRIP3 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.

GENE EXPRESSION MONITORING

HIRIP3 (D-10): sc-376814 is recommended as a control antibody for monitoring of HIRIP3 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor HIRIP3 gene expression knockdown using RT-PCR Primer: HIRIP3 (h)-PR: sc-93460-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.