SANTA CRUZ BIOTECHNOLOGY, INC.

HJURP siRNA (m): sc-140466

BACKGROUND

HJURP (holliday junction recognition protein), also known as FAKTS, URLC9 or hFLEG1, is a 748 amino acid protein that is expressed in thymus, placenta, small intestine, liver, skeletal muscle, bone marrow and colon. When histone H3-like variant CENP-A nucleosomes are assembled, HJURP localizes in centromeres during late telophase and early G_1 phase, and localizes to the nucleolus during S phase. Considered a centromeric protein, HJURP plays a central role in the incorporation and maintenance of CENP-A at centromeres. HJURP also acts as a specific chaperone for CENP-A and is required for the incorporation of newly synthesized CENP-A molecules into nucleosomes at replicated centromeres. HJURP is considered an indispensable factor for chromosomal stability in immortalized cancer cells and is a potential novel therapeutic target for the development of anticancer drugs.

REFERENCES

1. Foltz, D.R., et al. 2006. The human CENP-A centromeric nucleosome-associated complex. Nat. Cell Biol. 8: 458-469.
2. Kato, T., et al. 2007. Activation of Holliday junction recognizing protein involved in the chromosomal stability and immortality of cancer cells. Cancer Res. 67: 8544-8553.
3. Black, B.E., et al. 2007. Centromere identity maintained by nucleosomes assembled with histone H3 containing the CENP-A targeting domain. Mol. Cell 25: 309-322.
4. Black, B.E., et al. 2008. The histone variant CENP-A and centromere specification. Curr. Opin. Cell Biol. 20: 91-100.
5. Foltz, D.R., et al. 2009. Centromere-specific assembly of CENP-α nucleosomes is mediated by HJURP. Cell 137: 472-484.
6. Dunleavy, E.M., et al. 2009. HJURP is a cell-cycle-dependent maintenance and deposition factor of CENP-A at centromeres. Cell 137: 485-497.
7. Sanchez-Pulido, L., et al. 2009. Common ancestry of the CENP-A chaperones Scm3 and HJURP. Cell 137: 1173-1174.
8. Bernad, R., et al. 2009. Epigenetic specification of centromeres by CENP-A. Exp. Cell Res. 315: 3233-3241.
9. Shuaib, M., et al. 2010. HJURP binds CENP-A via a highly conserved N-terminal domain and mediates its deposition at centromeres. Proc. Natl. Acad. Sci. USA 107: 1349-1354.

CHROMOSOMAL LOCATION

Genetic locus: Hjurp (mouse) mapping to 1 D.

PRODUCT

HJURP siRNA (m) is a target-specific 19-25 nt siRNA 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 HJURP shRNA Plasmid (m): sc-140466-SH and HJURP shRNA (m) Lentiviral Particles: sc-140466-V as alternate gene silencing products.

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

HJURP siRNA (m) is recommended for the inhibition of HJURP 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 HJURP gene expression knockdown using RT-PCR Primer: HJURP (m)-PR: sc-140466-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.