

SLX4IP siRNA (h): sc-72749

BACKGROUND

SLX4IP (SLX4 interacting protein), also known as C20orf94, is a 408 amino acid protein belonging to the SLX4IP family. A monoallelic deletion of the 5' region of SLX4IP by illegitimate V(D)J-mediated recombination is found in a percentage of patients with acute lymphoblastic leukemia. Acute lymphoblastic leukemia is observed with approximately 20% higher incidence in males than females, with deletions affecting SLX4IP and TAL1 associated with the disease occurring significantly more frequently in males. The SLX4IP gene is located on chromosome 20p12.2 in humans, and is conserved in chimpanzee, Rhesus monkey, canine, mouse, rat, chicken, and frog. Representing about 2% of human DNA, chromosome 20 consists of approximately 63 million bases and 600 genes. Chromosome 20 contains a region with numerous genes expressed in the epididymis that are thought important for seminal production and some viewed as potential targets for male contraception.

REFERENCES

1. Lundwall, A. 2007. A locus on chromosome 20 encompassing genes that are highly expressed in the epididymis. *Asian J. Androl.* 9: 540-544.
2. O'Rand, M.G., et al. 2007. Eppin: an epididymal protease inhibitor and a target for male contraception. *Soc. Reprod. Fertil. Suppl.* 63: 445-453.
3. Svendsen, J.M., et al. 2009. Mammalian BTBD12/SLX4 assembles a Holliday junction resolvase and is required for DNA repair. *Cell* 138: 63-77.
4. Warnatz, H.J., et al. 2011. The BTB and CNC homology 1 (BACH1) target genes are involved in the oxidative stress response and in control of the cell cycle. *J. Biol. Chem.* 286: 23521-23532.
5. Ghosal, G., et al. 2012. Proliferating cell nuclear antigen (PCNA)-binding protein C1orf124 is a regulator of translesion synthesis. *J. Biol. Chem.* 287: 34225-34233.
6. Laguette, N., et al. 2014. Premature activation of the SLX4 complex by Vpr promotes G₂/M arrest and escape from innate immune sensing. *Cell* 156: 134-145.
7. Meissner, B., et al. 2014. Frequent and sex-biased deletion of SLX4IP by illegitimate V(D)J-mediated recombination in childhood acute lymphoblastic leukemia. *Hum. Mol. Genet.* 23: 590-601.

CHROMOSOMAL LOCATION

Genetic locus: SLX4IP (human) mapping to 20p12.2.

PRODUCT

SLX4IP 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SLX4IP shRNA Plasmid (h): sc-72749-SH and SLX4IP shRNA (h) Lentiviral Particles: sc-72749-V as alternate gene silencing products.

For independent verification of SLX4IP (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-72749A, sc-72749B and sc-72749C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

SLX4IP siRNA (h) is recommended for the inhibition of SLX4IP 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 μ M in 66 μ l. 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

SLX4IP (G-4): sc-377066 is recommended as a control antibody for monitoring of SLX4IP 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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 SLX4IP gene expression knockdown using RT-PCR Primer: SLX4IP (h)-PR: sc-72749-PR (20 μ l). 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.