

Sororin siRNA (m): sc-61600

BACKGROUND

Sororin, also designated cell division cycle-associated protein 5 (CDCA5) or p35, functions as a regulator of sister chromatid cohesion during mitosis. It interacts with the APC/C complex and is found in a complex consisting of cohesion components SCC-112, MC1L1, SMC3L1, RAD21 and APRIN. The deduced human and mouse Sororin proteins consist of 252 and 264 amino acid residues, respectively, and both contain a KEN box for APC-dependent ubiquitination. Reserach demonstrates a punctated nuclear distribution of Sororin during interphase and a diffuse distribution throughout the cell during mitosis. There is no apparent concentration of Sororin on chromatin in mitotic cells and Sororin levels decrease in synchronized HeLa cells during interphase. The Sororin gene maps to chromosome 11q12.1.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609374. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Rankin, S. 2005. Sororin, the cell cycle and sister chromatid cohesion. *Cell Cycle* 4: 1039-1042.
3. Rankin, S., et al. 2005. Sororin, a substrate of the anaphase-promoting complex, is required for sister chromatid cohesion in vertebrates. *Mol. Cell* 18: 185-200.
4. Sakaue, F., et al. 2005. Phosphorylation of FTDP-17 mutant Tau by cyclin-dependent kinase 5 complexed with p35, p25, or p39. *J. Biol. Chem.* 280: 31522-31529.
5. Strock, C.J., et al. 2006. Cyclin-dependent kinase 5 activity controls cell motility and metastatic potential of prostate cancer cells. *Cancer Res.* 66: 7509-7515.
6. Kim, E., et al. 2006. CDK5 is a novel regulatory protein in PPAR γ ligand-induced antiproliferation. *Int. J. Oncol.* 28: 191-194.

CHROMOSOMAL LOCATION

Genetic locus: Cdc5 (mouse) mapping to 19 A.

PRODUCT

Sororin siRNA (m) 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 Sororin shRNA Plasmid (m): sc-61600-SH and Sororin shRNA (m) Lentiviral Particles: sc-61600-V as alternate gene silencing products.

For independent verification of Sororin (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-61600A, sc-61600B and sc-61600C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support 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 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

Sororin siRNA (m) is recommended for the inhibition of Sororin 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 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

Sororin (B-9): sc-365319 is recommended as a control antibody for monitoring of Sororin 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 Sororin gene expression knockdown using RT-PCR Primer: Sororin (m)-PR: sc-61600-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.