

# scc-112 siRNA (h): sc-61497

## BACKGROUND

scc-112 is a nuclear cell-cycle regulated protein that is comprised of 1,297 amino acids. scc-112 mRNA and protein levels are detected at high levels during the G<sub>2</sub>/M phase of the cell cycle in MDA-MB 435 breast cancer cells. scc-112 protein expression is also high in normal renal tissues as compared to the equivalent renal tumor tissues. The level of scc-112 in normal kidney and breast tissues is significantly higher than in corresponding tumor tissues, suggesting that scc-112 is downregulated in tumor tissues and that scc-112 gene expression is associated with normal cell growth and proliferations. The human scc-112 protein is homologous to the mouse 9030416H16Rik protein. SCC-112, the gene which encodes the human scc-112 protein, maps to chromosome 4p14.

## REFERENCES

1. Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G., Klausner, R.D., Collins, F.S., Wagner, L., Shenmen, C.M., Schuler, G.D., Altschul, S.F., Zeeberg, B., Buetow, K.H., Schaefer, C.F., Bhat, N.K., Hopkins, R.F., et al. 2002. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. *Proc. Natl. Acad. Sci. USA* 99: 16899-16903.
2. Kumar, D., Sakabe, I., Patel, S., Zhang, Y., Ahmad, I., Gehan, E.A., Whiteside, T.L. and Kasid, U. 2004. scc-112, a novel cell cycle-regulated molecule, exhibits reduced expression in human renal carcinomas. *Gene* 328: 187-196.
3. Okazaki, N., F-Kikuno, R., Ohara, R., Inamoto, S., Koseki, H., Hiraoka, S., Saga, Y., Seino, S., Nishimura, M., Kaisho, T., Hoshino, K., Kitamura, H., Nagase, T., Ohara, O. and Koga, H. 2004. Prediction of the coding sequences of mouse homologues of KIAA gene: IV. The complete nucleotide sequences of 500 mouse KIAA-homologous cDNAs identified by screening of terminal sequences of cDNA clones randomly sampled from size-fractionated libraries. *DNA Res.* 11: 205-218.

## CHROMOSOMAL LOCATION

Genetic locus: PDS5A (human) mapping to 4p14.

## PRODUCT

scc-112 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see scc-112 shRNA Plasmid (h): sc-61497-SH and scc-112 shRNA (h) Lentiviral Particles: sc-61497-V as alternate gene silencing products.

For independent verification of scc-112 (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-61497A, sc-61497B and sc-61497C.

## PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

scc-112 siRNA (h) is recommended for the inhibition of scc-112 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  $\mu$ M in 66  $\mu$ 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

scc-112 (A-10): sc-515263 is recommended as a control antibody for monitoring of scc-112 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 $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 scc-112 gene expression knockdown using RT-PCR Primer: scc-112 (h)-PR: sc-61497-PR (20  $\mu$ 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.