

Sall2 siRNA (h): sc-44085

BACKGROUND

Sall1 [SALL1, sal-like 1, TBS, HSAL1] and Sall2 [SALL2, sal-like 2, HSAL2, p150 (Sal2)] are mammalian homologs of the *Drosophila* region-specific homeotic gene spalt (sal), which encodes a zinc finger-containing transcription regulator. *Drosophila* spalt (sal) is an essential genetic component required for the specification of posterior head and anterior tail as opposed to trunk. Mammalian Sall1 may mediate higher order chromatin structure, and may be a component of a distinct heterochromatin-dependent silencing process. Sall1 is present in kidney, brain and liver. Sall2 is a p53-independent regulator of p21 and BAX, and can function in some cell types as a regulator of cell growth and survival. Human Sall2 is present in brain, heart, kidney or pancreas. Sall1 and Sall2 are expressed in different areas of the fetal brain that may represent distinct sets of neurons.

REFERENCES

1. Nielsen, T.O., et al. 2003. Tissue microarray validation of epidermal growth factor receptor and Sall2 in synovial sarcoma with comparison to tumors of similar histology. *Am. J. Pathol.* 163: 1449-1456.
2. Sato, A., et al. 2003. Zinc finger protein Sall2 is not essential for embryonic and kidney development. *Mol. Cell. Biol.* 23: 62-69.
3. Wabbels, B.K., et al. 2004. Clinical and molecular genetic findings in isolated sporadic Duane syndrome. *Klin. Monatsbl. Augenheilkd.* 221: 849-853.
4. Wabbels, B.K., et al. 2004. No evidence of Sall4-mutations in isolated sporadic Duane retraction "syndrome" (DURS). *Am. J. Med. Genet. A* 131: 216-218.
5. Borozdin, W., et al. 2004. Novel mutations in the gene Sall4 provide further evidence for acro-renal-ocular and Okihiro syndromes being allelic entities, and extend the phenotypic spectrum. *J. Med. Genet.* 41: e102.
6. Borozdin, W., et al. 2004. Sall4 deletions are a common cause of Okihiro and acro-renal-ocular syndromes and confirm haploinsufficiency as the pathogenic mechanism. *J. Med. Genet.* 41: e113.
7. Kohlhasse, J., et al. 2004. Mutations in Sall4 in malformed father and daughter postulated previously due to reflect mutagenesis by thalidomide. *Birth Defects Res. A Clin. Mol. Teratol.* 70: 550-551.

CHROMOSOMAL LOCATION

Genetic locus: SALL2 (human) mapping to 14q11.2.

PRODUCT

Sall2 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 Sall2 shRNA Plasmid (h): sc-44085-SH and Sall2 shRNA (h) Lentiviral Particles: sc-44085-V as alternate gene silencing products.

For independent verification of Sall2 (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-44085A, sc-44085B and sc-44085C.

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

Sall2 siRNA (h) is recommended for the inhibition of Sall2 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

Sall2 (PL-A12): sc-135619 is recommended as a control antibody for monitoring of Sall2 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 Sall2 gene expression knockdown using RT-PCR Primer: Sall2 (h)-PR: sc-44085-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.