

SMYD4 siRNA (h): sc-94235

BACKGROUND

The SMYD (SET and MYND domain-containing) family of proteins, designated SMYD1, SMYD2, SMYD3 and SMYD4, play a role in transcriptional regulation and may interact with the HDAC family of histone deacetylases. Members of the SMYD family contain MYND (myeloid translocation protein 8 (MTG8/ETO), Nervi protein and DEAF-1) and SET domains through which protein-protein interactions and transcriptional-associated activities are conferred. SMYD4 (SET and MYND domain-containing protein 4), also known as ZMYND21, is an 804 amino acid protein that contains one SET domain and one MYND-type zinc finger.

REFERENCES

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3. Hamamoto, R., Furukawa, Y., Morita, M., Imura, Y., Silva, F.P., Li, M., Yagyu, R. and Nakamura, Y. 2004. SMYD3 encodes a histone methyltransferase involved in the proliferation of cancer cells. *Nat. Cell Biol.* 6: 731-740.
4. Brandenberger, R., Wei, H., Zhang, S., Lei, S., Murage, J., Fisk, G.J., Li, Y., Xu, C., Fang, R., Guegler, K., Rao, M.S., Mandalam, R., Lebkowski, J. and Stanton, L.W. 2004. Transcriptome characterization elucidates signaling networks that control human ES cell growth and differentiation. *Nat. Biotechnol.* 22: 707-716.
5. Kageyama, Si., Sonehara, H., Nagata, M. and Aoki, F. 2007. Expression of histone methylases and demethylases during preimplantation development in mice. *J. Mammalian Ova Res.* 24: 126-131.

CHROMOSOMAL LOCATION

Genetic locus: SMYD4 (human) mapping to 17p13.3.

PRODUCT

SMYD4 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 SMYD4 shRNA Plasmid (h): sc-94235-SH and SMYD4 shRNA (h) Lentiviral Particles: sc-94235-V as alternate gene silencing products.

For independent verification of SMYD4 (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-94235A, sc-94235B and sc-94235C.

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

SMYD4 siRNA (h) is recommended for the inhibition of SMYD4 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

SMYD4 (Ac-10): sc-517360 is recommended as a control antibody for monitoring of SMYD4 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).

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SMYD4 gene expression knockdown using RT-PCR Primer: SMYD4 (h)-PR: sc-94235-PR (20 μ l, 593 bp). 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.