SANTA CRUZ BIOTECHNOLOGY, INC.

DHRS9 siRNA (m): sc-105296

BACKGROUND

DHRS9 (dehydrogenase/reductase (SDR family) member 9), also known as RDHL, RDH15, RDHTBE, SDR9C4 or RETSDR8, is a 319 amino acid protein that localizes to the membrane of both the microsome and the endoplasmic reticulum and belongs to the short-chain dehydrogenase/reductase family. Expressed at high levels in trachea and epidermis and present at lower levels in brain, colon, heart, lung, testis, placenta and skeletal muscle, DHRS9 functions as a homotetramer that converts both 3-α-tetrahydroprogesterone (allopregnanolone) and 3-α-androstanediol to dihydroxyprogesterone and is thought to play a role in retinoic acid biosynthesis. Multiple isoforms of DHRS9 exist due to alternative splicing events.

REFERENCES

1. Haeseleer, F., et al. 2000. Short-chain dehydrogenases/reductases in retina. Methods Enzymol. 316: 372-383.
2. Chetyrkin, S.V., et al. 2001. Characterization of a novel type of human microsomal 3α-hydroxysteroid dehydrogenase: unique tissue distribution and catalytic properties. J. Biol. Chem. 276: 22278-22286.
3. Soref, C.M., et al. 2001. Characterization of a novel airway epithelial cell-specific short chain alcohol dehydrogenase/reductase gene whose expression is up-regulated by retinoids and is involved in the metabolism of retinol. J. Biol. Chem. 276: 24194-24202.
4. Markova, N.G., et al. 2003. Expression pattern and biochemical characteristics of a major epidermal retinol dehydrogenase. Mol. Genet. Metab. 78: 119-135.
5. Jette, C., et al. 2004. The tumor suppressor adenomatous polyposis coli and caudal related homeodomain protein regulate expression of retinol dehydrogenase L. J. Biol. Chem. 279: 34397-34405.
6. Jones, R.J., et al. 2007. Epstein-Barr virus lytic infection induces retinoic acid-responsive genes through induction of a retinol-metabolizing enzyme, DHRS9. J. Biol. Chem. 282: 8317-8324.
7. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612131. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: Dhrs9 (mouse) mapping to 2 C2.

PRODUCT

DHRS9 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see DHRS9 shRNA Plasmid (m): sc-105296-SH and DHRS9 shRNA (m) Lentiviral Particles: sc-105296-V as alternate gene silencing products.

For independent verification of DHRS9 (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-105296A, sc-105296B and sc-105296C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

DHRS9 siRNA (m) is recommended for the inhibition of DHRS9 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 µM in 66 µl. 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor DHRS9 gene expression knockdown using RT-PCR Primer: DHRS9 (m)-PR: sc-105296-PR (20 µl). 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.