SANTA CRUZ BIOTECHNOLOGY, INC.

3β-HSD4 siRNA (m): sc-108887

BACKGROUND

3β-HSD4 (3 β-hydroxysteroid dehydrogenase type 4) is a 373 amino acid murine protein that localizes to the membrane of both the mitochondrion and the endoplasmic reticulum and belongs to the 3β-HSD family. Expressed in kidney and testis, 3β-HSD4 functions to catalyze the $NADP^+$-dependent conversion of 3-β-hydroxy-Δ^5-steroid to 3-oxo-Δ^5-steroid, thereby playing a crucial role in the biosynthesis of hormonal steroids. The gene encoding 3β-HSD4 maps to mouse chromosome 3. Murine chromosome 3 houses over 1,300 genes, some of which express alcohol dehydrogenases (ADHs), sodium channel modifiers (SCNMs), interleukins (ILs) and Insulin receptor-related (IRR) proteins. Defects in chromosome 3-localized genes are associated with hereditary congenital facial paresis (HCFP), increased susceptibility to spontaneous colitis, HIV-1-associated nephropathy, decreased renal vascular health and malignant sporadic pancreatic endocrine tumors.

REFERENCES

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3. Clarke, T.R., et al. 1996. Isolation and characterization of several members of the murine Hsd3β gene family. DNA Cell Biol. 15: 387-399.
4. Park, C.H., et al. 1996. Expression of multiple forms of 3β-hydroxysteroid dehydrogenase in the mouse liver during fetal and postnatal development. Mol. Cell. Endocrinol. 116: 157-164.
5. Abbaszade, I.G., et al. 1997. Isolation of a new mouse 3β-hydroxysteroid dehydrogenase isoform, 3β-HSD VI, expressed during early pregnancy. Endocrinology 138: 1392-1399.
6. Wong, J.S., et al. 2002. Effect of a peroxisome proliferator on 3β-hydroxysteroid dehydrogenase. Biochem. Biophys. Res. Commun. 293: 549-553.
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CHROMOSOMAL LOCATION

Genetic locus: Hsd3b4 (mouse) mapping to 3 F2.2.

PRODUCT

3β-HSD4 siRNA (m) is a target-specific 19-25 nt siRNA 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 3β-HSD4 shRNA Plasmid (m): sc-108887-SH and 3β-HSD4 shRNA (m) Lentiviral Particles: sc-108887-V as alternate gene silencing 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 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

3β-HSD4 siRNA (m) is recommended for the inhibition of 3β-HSD4 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 3β-HSD4 gene expression knockdown using RT-PCR Primer: 3β-HSD4 (m)-PR: sc-108887-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.