

# 17 $\beta$ -HSD8 siRNA (h): sc-72400

## BACKGROUND

17 $\beta$ -HSD8 (17 $\beta$  hydroxysteroid dehydrogenase type 8) belongs to the 17 $\beta$ -HSD family of proteins that regulate the availability of steroids within a tissue. 17 $\beta$ -HSD8 converts active steroids to their inactive form through its oxidative activity. It is a key player in the inactivation of Estradiol and Testosterone. 17 $\beta$ -HSD8 is predominantly expressed in placenta, endometrium and prostate but can also be found in liver and pancreas, with lowest levels found in testis, ovary and kidney. It has been proposed that a reduction in the levels of 17 $\beta$ -HSD8 may lead to abnormal elevations in the local level of sex steroids, which can lead to recessive renal cystic disease. It has also been suggested that low levels of 17 $\beta$ -HSD proteins may result in an underdeveloped urogenital system.

## REFERENCES

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- Kikuti, Y.Y., et al. 1997. Physical mapping 220 kb centromeric of the human MHC and DNA sequence analysis of the 43-kb segment including the RING1, HKE6, and HKE4 genes. *Genomics* 42: 422-435.
- Fomitcheva, J., et al. 1998. Characterization of Ke 6, a new 17 $\beta$ -hydroxysteroid dehydrogenase, and its expression in gonadal tissues. *J. Biol. Chem.* 273: 22664-22671.
- Aziz, N., et al. 2001. Arrested testis development in the cpk mouse may be the result of abnormal steroid metabolism. *Mol. Cell. Endocrinol.* 171: 83-88.
- Ma, Y., et al. 2006. Molecular cloning of bovine FABGL gene and its effects on bovine bioeconomic traits. *Yi Chuan Xue Bao* 33: 1096-1104.
- Villar, J., et al. 2007. Transcriptional regulation of the human type 8 17 $\beta$ -hydroxysteroid dehydrogenase gene by C/EBP $\beta$ . *J. Steroid Biochem. Mol. Biol.* 105: 131-139.

## CHROMOSOMAL LOCATION

Genetic locus: HSD17B8 (human) mapping to 6p21.32.

## PRODUCT

17 $\beta$ -HSD8 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 17 $\beta$ -HSD8 shRNA Plasmid (h): sc-72400-SH and 17 $\beta$ -HSD8 shRNA (h) Lentiviral Particles: sc-72400-V as alternate gene silencing products.

For independent verification of 17 $\beta$ -HSD8 (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-72400A, sc-72400B and sc-72400C.

## 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 $^{\circ}$  C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20 $^{\circ}$  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

17 $\beta$ -HSD8 siRNA (h) is recommended for the inhibition of 17 $\beta$ -HSD8 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

17 $\beta$ -HSD8 (G-4): sc-515239 is recommended as a control antibody for monitoring of 17 $\beta$ -HSD8 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<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor 17 $\beta$ -HSD8 gene expression knockdown using RT-PCR Primer: 17 $\beta$ -HSD8 (h)-PR: sc-72400-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60 $^{\circ}$  C and the extension temperature should be 68-72 $^{\circ}$  C.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.