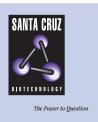
# SANTA CRUZ BIOTECHNOLOGY, INC.

# 17β-HSD7 (K-12): sc-160116



### BACKGROUND

17β-HSD7 (17β hydroxysteroid dehydrogenase type 7), also designated 3-ketosteroid reductase, belongs to the 17β-HSD family of proteins, which regulate the availability of steroids within various tissues throughout the body. 17β-HSD7 is a 341 amino acid protein that converts estrone to estradiol and is also involved in cholesterol biosynthesis. 17β-HSD7 is highly expressed in adrenal gland, liver, lung and thymus. It is also expressed in the corpus luteum, where it is thought to play a role in fetal development. Single nucleotide polymorphisms in the gene encoding 17β-HSD7 have been shown to affect its level of transcription in LNCaP and DU145 cells, which may modulate an adverse reaction induced by estramustine phosphate sodium.

### REFERENCES

- Nokelainen, P., Peltoketo, H., Vihko, R. and Vihko, P. 1998. Expression cloning of a novel estrogenic mouse 17 β-hydroxysteroid dehydrogenase/ 17-ketosteroid reductase (m17HSD7), previously described as a prolactin receptor-associated protein (PRAP) in rat. Mol. Endocrinol. 12: 1048-1059.
- Marijanovic, Z., Laubner, D., Moller, G., Gege, C., Husen, B., Adamski, J. and Breitling, R. 2003. Closing the gap: identification of human 3-ketosteroid reductase, the last unknown enzyme of mammalian cholesterol biosynthesis. Mol. Endocrinol. 17: 1715-1725.
- Risk, M., Shehu, A., Mao, J., Stocco, C.O., Goldsmith, L.T., Bowen-Shauver, J.M. and Gibori, G. 2005. Cloning and characterization of a 5' regulatory region of the prolactin receptor-associated protein/17β hydroxysteroid dehydrogenase 7 gene. Endocrinology 146: 2807-2816.
- Seth, G., McIvor, R.S. and Hu, W.S. 2006. 17β-hydroxysteroid dehydrogenase type 7 (Hsd17b7) reverts cholesterol auxotrophy in NS0 cells. J. Biotechnol. 121: 241-252.
- Ohnesorg, T., Keller, B., Hrabé de Angelis, M. and Adamski, J. 2006. Transcriptional regulation of human and murine 17β-hydroxysteroid dehydrogenase type-7 confers its participation in cholesterol biosynthesis. J. Mol. Endocrinol. 37: 185-197.
- Ohnesorg, T. and Adamski, J. 2006. Analysis of the 5' flanking regions of human and murine HSD17B7: identification of a cholesterol dependent enhancer region. Mol. Cell. Endocrinol. 248: 164-167.
- 7. Shehu, A., Mao, J., Gibori, G.B., Halperin, J., Le, J., Devi, Y.S., Merrill, B., Kiyokawa, H. and Gibori, G. 2008. Prolactin receptor-associated protein/  $17\beta$ -hydroxysteroid dehydrogenase type 7 gene (Hsd17b7) plays a crucial role in embryonic development and fetal survival. Mol. Endocrinol. 22: 2268-2277.
- Ozeki, T., Takeuchi, M., Suzuki, M., Kitamura, T., Takayanagi, R., Yokoyama, H. and Yamada, Y. 2009. Single nucleotide polymorphisms of 17β-hydroxysteroid dehydrogenase type 7 gene: mechanism of estramustine-related adverse reactions? Int. J. Urol. 16: 836-841.

#### **STORAGE**

Store at 4° C, \*\*D0 NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

#### CHROMOSOMAL LOCATION

Genetic locus: Hsd17b7 (mouse) mapping to 1 H3.

#### SOURCE

17 $\beta$ -HSD7 (K-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of 17 $\beta$ -HSD7 of mouse origin.

#### PRODUCT

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-160116 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### **APPLICATIONS**

17β-HSD7 (K-12) is recommended for detection of 17β-HSD7 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with other 17β-HSD family members.

Suitable for use as control antibody for 17 $\beta$ -HSD7 siRNA (m): sc-108266, 17 $\beta$ -HSD7 shRNA Plasmid (m): sc-108266-SH and 17 $\beta$ -HSD7 shRNA (m) Lentiviral Particles: sc-108266-V.

Molecular Weight of 17β-HSD7: 38/37/34 kDa.

#### **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluo-rescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

#### **RESEARCH USE**

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

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.