

17 β -HSD (M-174): sc-32872

BACKGROUND

17 β -hydroxysteroid dehydrogenase type 1 (17 β -HSD) catalyzes the final step in the formation of estradiol and testosterone from estrone and androstenedione, respectively. Ovarian granulosa cells and breast tissue both express 17 β -HSD. Other tissues that express 17 β -HSD include testis, placenta, uterus, prostate and adipose tissue. 17 β -HSD functions as a homodimer and prefers NADP(H) over NAD(H) for oxidation and reduction. The gene encoding human 17 β -HSD maps to chromosome 17q21.2. The importance of 17 β -HSD to estradiol production suggests the specific inhibition of 17 β -HSD may aid in breast cancer therapy. Breast cancer patients with an amplification of 17 β -HSD expression statistically have a worse outcome than those without. 17 β -HSD amplification in tamoxifen-treated patients correlates to decreased breast cancer survival.

CHROMOSOMAL LOCATION

Genetic locus: HSD17B1 (human) mapping to 17q21.2; Hsd17b1 (mouse) mapping to 11 D.

SOURCE

17 β -HSD (M-174) is a rabbit polyclonal antibody raised against amino acids 171-344 mapping at the C-terminus of 17 β -HSD of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

17 β -HSD (M-174) is recommended for detection of 17 β -HSD of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for 17 β -HSD siRNA (h): sc-41381, 17 β -HSD siRNA (m): sc-41382, 17 β -HSD shRNA Plasmid (h): sc-41381-SH, 17 β -HSD shRNA Plasmid (m): sc-41382-SH, 17 β -HSD shRNA (h) Lentiviral Particles: sc-41381-V and 17 β -HSD shRNA (m) Lentiviral Particles: sc-41382-V.

Molecular Weight of 17 β -HSD: 35 kDa.

STORAGE

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

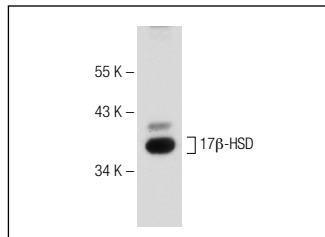
PROTOCOLS

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

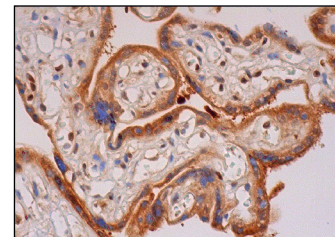
RESEARCH USE

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

DATA



17 β -HSD (M-174): sc-32872. Western blot analysis of 17 β -HSD expression in BT-20 whole cell lysate.



17 β -HSD (M-174): sc-32872. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells.

SELECT PRODUCT CITATIONS

- Putti, R., et al. 2009. Leptin effects on testis and epididymis in the lizard *Podarcis sicula*, during summer regression. *Gen. Comp. Endocrinol.* 160: 168-175.
- Zhao, Y., et al. 2010. Perfluorooctanoic acid effects on steroid hormone and growth factor levels mediate stimulation of peripubertal mammary gland development in C57BL/6 mice. *Toxicol. Sci.* 115: 214-224.
- Zhang, H., et al. 2010. Pubertal and early adult exposure to fenvalerate disrupts steroidogenesis and spermatogenesis in mice at adulthood. *J. Appl. Toxicol.* 30: 369-377.
- Ren, X.M., et al. 2012. The protection of selenium on cadmium-induced inhibition of spermatogenesis via activating testosterone synthesis in mice. *Food Chem. Toxicol.* 50: 3521-3529.
- Zhao, Y., et al. 2012. Perfluorooctanoic acid effects on ovaries mediate its inhibition of peripubertal mammary gland development in Balb/c and C57Bl/6 mice. *Reprod. Toxicol.* 33: 563-576.
- Wang, H., et al. 2012. Maternal lead exposure during lactation persistently impairs testicular development and steroidogenesis in male offspring. *J. Appl. Toxicol.* 33:1384-1394.

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Try **17 β -HSD (D-8): sc-373902** or **17 β -HSD (F-9): sc-365888**, our highly recommended monoclonal alternatives to 17 β -HSD (M-174).