

17 β -HSD (S-17): sc-26964

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.

REFERENCES

1. Luu-The, V., et al. 1990. Structure of two in tandem human 17 β -hydroxysteroid dehydrogenase genes. *Mol. Endocrinol.* 4: 268-275.
2. Winqvist, R., et al. 1990. The gene for 17 β -hydroxysteroid dehydrogenase maps to human chromosome 17, bands q12-q21, and shows an RFLP with *Scal*. *Hum. Genet.* 85: 473-476.
3. Lin, S.X., et al. 1992. Subunit identity of the dimeric 17 β -hydroxysteroid dehydrogenase from human placenta. *J. Biol. Chem.* 267: 16182-16187.
4. Poutanen, M., et al. 1993. Differential estrogen substrate specificities for transiently expressed human placental 17 β -hydroxysteroid dehydrogenase and an endogenous enzyme expressed in cultured COS-m6 cells. *Endocrinology* 133: 2639-2644.
5. Luu-The, V., et al. 1995. Characteristics of human types 1, 2 and 3 17 β -hydroxysteroid dehydrogenase activities: oxidation/reduction and inhibition. *J. Steroid Biochem. Mol. Biol.* 55: 581-587.
6. Vihko, P., et al. 2001. Structure and function of 17 β -hydroxysteroid dehydrogenase type 1 and type 2. *Mol. Cell. Endocrinol.* 171: 71-76.

CHROMOSOMAL LOCATION

Genetic locus: HSD17B1 (human) mapping to 17q21.2.

SOURCE

17 β -HSD (S-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of 17 β -HSD of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-26964 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

17 β -HSD (S-17) is recommended for detection of 17 β -HSD of human 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).

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

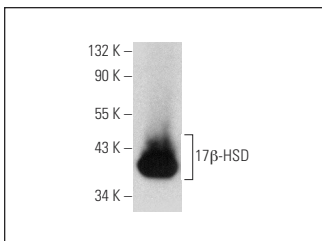
Molecular Weight of 17 β -HSD: 34.5 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or BT-20 cell lysate: sc-2223.

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) Immunofluorescence: 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.

DATA



17 β -HSD (S-17): sc-26964. Western blot analysis of 17 β -HSD expression in BT-20 whole cell lysate.

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.

MONOS
Satisfaction
Guaranteed

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 (S-17).