SANTA CRUZ BIOTECHNOLOGY, INC.

17β-HSD2 (V-15): sc-66414

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

17β-HSD2 (17β hydroxysteroid dehydrogenase type 2) belongs to the 17β-HSD family of proteins that regulate the availability of steroids within a tissue. 17β-HSD2 converts active steroids to their inactive form through its oxidative activity. It is a key player in the inactivation of Estradiol and testosterone. Due to the affects that 17β-HSD2 has on the availability of estrogen, it has been extensively investigated for playing a possible role in breast tumor development, colon cancer development and the pathophysiology of endometriosis. 17β-HSD2 is predominantly expressed in the placenta, endometrium and prostate but can also be found in the liver, small intestine, and kidney. 17β-HSD2 is a membrane bound protein. Tibolone, a treatment used for climacteric symptoms in menopausal women, functions in part by activating 17β-HSD2.

REFERENCES

1. Akinola, L.A., et al. 1996. Cloning of rat 17 β-hydroxysteroid dehydrogenase type 2 and characterization of tissue distribution and catalytic activity of rat type 1 and type 2 enzymes. Endocrinology 137:1572-1579.
2. Zeitoun, K., et al. 1998. Deficient 17β-hydroxysteroid dehydrogenase type 2 expression in endometriosis: failure to metabolize 17β-estradiol. J. Clin. Endocrinol. Metab. 83: 4474-4480.
3. English, M.A., et al. 2001. Estrogen metabolism and malignancy: analysis of the expression and function of 17β-hydroxysteroid dehydrogenases in colonic cancer. Mol. Cell. Endocrinol. 171: 53-60.
4. Cheng, Y.H., et al. 2006. SP1 and SP3 mediate progesterone-dependent induction of the 17beta hydroxysteroid dehydrogenase type 2 gene in human endometrium. Biol. Reprod. 75: 605-614.
5. Day, J.M., et al. 2006. 17β-hydroxysteroid dehydrogenase Type 1 and Type 2: association between mRNA expression and activity in cell lines. Mol. Cell. Endocrinol. 248: 246-249.
6. Jansson, A., et al. 2006. Proliferative responses to altered 17β-hydroxysteroid dehydrogenase (17HSD) type 2 expression in human breast cancer cells are dependent on endogenous expression of 17HSD type 1 and the oestradiol receptors. Endocr. Relat. Cancer 13: 875-884.
7. Purohit, A. et al. 2006. The regulation and inhibition of 17β-hydroxysteroid dehydrogenase in breast cancer. Mol. Cell. Endocrinol. 248: 199-203.
8. Raobaikady, B., et al. 2007. Tibolone and its δ-4, 7α-methyl norethisterone metabolite are reversible inhibitors of human aromatase. J. Steroid Biochem. Mol Biol. 104: 154-160.

CHROMOSOMAL LOCATION

Genetic locus: Hsd17b2 (mouse) mapping to 8 E1.

STORAGE

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

RESEARCH USE

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

SOURCE

17β-HSD2 (V-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of 17β-HSD2 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-66414 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

17β-HSD2 (V-15) is recommended for detection of 17β-HSD2 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).

Suitable for use as control antibody for 17β-HSD2 siRNA (m): sc-61915, 17β-HSD2 shRNA Plasmid (m): sc-61915-SH and 17β-HSD2 shRNA (m) Lentiviral Particles: sc-61915-V.

Molecular Weight of 17β-HSD2: 43 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) 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.

PROTOCOLS

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