SANTA CRUZ BIOTECHNOLOGY, INC.

17β-HSD2 (E-7): sc-374150

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 17β-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 17-β 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.

CHROMOSOMAL LOCATION

Genetic locus: HSD17B2 (human) mapping to 16q23.3; Hsd17b2 (mouse) mapping to 8 E1.

SOURCE

17β-HSD2 (E-7) is a mouse monoclonal antibody raised against a peptide mapping within an internal region of 17β-HSD2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

17β-HSD2 (E-7) is available conjugated to agarose (sc-374150 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374150 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374150 PE), fluorescein (sc-374150 FITC), Alexa Fluor® 488 (sc-374150 AF488), Alexa Fluor® 546 (sc-374150 AF546), Alexa Fluor® 594 (sc-374150 AF594) or Alexa Fluor® 647 (sc-374150 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374150 AF680) or Alexa Fluor® 790 (sc-374150 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

17β-HSD2 (E-7) is recommended for detection of 17β-HSD2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 17β-HSD2 siRNA (h): sc-61914, 17β-HSD2 siRNA (m): sc-61915, 17β-HSD2 shRNA Plasmid (h): sc-61914-SH, 17β-HSD2 shRNA Plasmid (m): sc-61915-SH, 17β-HSD2 shRNA (h) Lentiviral Particles: sc-61914-V and 17β-HSD2 shRNA (m) Lentiviral Particles: sc-61915-V.

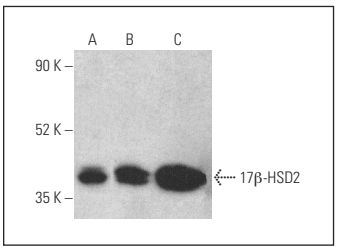
Molecular Weight of 17β-HSD2: 43 kDa.

Positive Controls: P19 cell lysate: sc-24760, M1 whole cell lysate: sc-364782 or EOC 20 whole cell lysate: sc-364187.

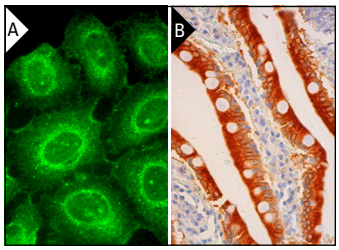
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



17β-HSD2 (E-7) HRP: sc-374150 HRP. Direct western blot analysis of 17β-HSD2 expression in P19 (**A**), M1 (**B**) and EOC 20 (**C**) whole cell lysates.



17β-HSD2 (E-7): sc-374150. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic and membrane staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Tiwari, S., et al. 2020. Gender-specific changes in energy metabolism and protein degradation as major pathways affected in livers of mice treated with ibuprofen. Sci. Rep. 10: 3386.

RESEARCH USE

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