SANTA CRUZ BIOTECHNOLOGY, INC.

# 17β-HSD3 (C-14): sc-66415

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

17β-HSD3 (17β-hydroxysteroid dehydrogenase type 3) belongs to the 17β-HSD family of proteins that regulate the availability of steroids within various tissues throughout the body. 17β-HSD3 is expressed predominantly in the testis. It is an NADPH-dependent, membrane-bound enzyme. 17β-HSD3 converts inactive steroids to their active form through its reductive activity. More specifically,17β-HSD3 catalyzes the conversion of androstenedione to testosterone in the testis. The production of testosterone is necessary for male sex differentiation. Mutations in the gene that encodes this protein can result in an autosomal recessive male to female sex reversal. A deficiency of 17β-HSD3 results in a defect in the biosynthesis of testosterone. 17β-HSD3 inhibitors include 1,4-androstadiene-1,6,17-trione, androsterone 3β-substituted derivatives, glycyrrhizin, glycyrrhetinic acid, losulazine, amphetamine, methotrexate and S-petasine.

## CHROMOSOMAL LOCATION

Genetic locus: HSD17B3 (human) mapping to 9q22.32; Hsd17b3 (mouse) mapping to 13 B3.

## SOURCE

17β-HSD3 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of 17β-HSD3 of human 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-66415 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

17β-HSD3 (C-14) is recommended for detection of 17β-HSD3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

17β-HSD3 (C-14) is also recommended for detection of 17β-HSD3 in additional species, including equine and porcine.

Suitable for use as control antibody for 17β-HSD3 siRNA (h): sc-61916, 17β-HSD3 siRNA (m): sc-61917, 17β-HSD3 shRNA Plasmid (h): sc-61916-SH, 17β-HSD3 shRNA Plasmid (m): sc-61917-SH, 17β-HSD3 shRNA (h) Lentiviral Particles: sc-61916-V and 17β-HSD3 shRNA (m) Lentiviral Particles: sc-61917-V.

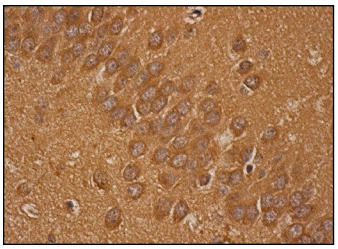
Molecular Weight of 17β-HSD3: 35 kDa.

Positive Controls: HUV-EC-C + VEGF cell lysate: sc-24709 or DU 145 cell lysate: sc-2268.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



17β-HSD3 (C-14): sc-66415. Immunoperoxidase staining of formalin fixed, paraffin-embedded human hippocampus tissue showing cytoplasmic staining of neuronal cells.

## SELECT PRODUCT CITATIONS


1. Sherrill, J.D., et al. 2010. Developmental exposures of male rats to soy isoflavones impact Leydig cell differentiation. Biol. Reprod. 83: 488-501.
2. Taylor, A.P., et al. 2010. Placental growth factor (PIGF) enhances breast cancer cell motility by mobilising ERK1/2 phosphorylation and cytoskeletal rearrangement. Br. J. Cancer 103: 82-89.
3. Latif, S.A., et al. 2011. Role of 11β-OH-C and C steroids in the coupling of 11β-HSD1 and 17β-HSD3 in regulation of testosterone biosynthesis in rat Leydig cells. Steroids 76: 682-689.
4. Nanjappa, M.K., et al. 2012. The industrial chemical bisphenol A (BPA) interferes with proliferative activity and development of steroidogenic capacity in rat Leydig cells. Biol. Reprod. 86: 135, 1-12.
5. Bennett, N.C., et al. 2012. Evidence for steroidogenic potential in human prostate cell lines and tissues. Am. J. Pathol. 181: 1078-1087.


## 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.