**3β-HSD (P-18): sc-30820**

**BACKGROUND**

3β-hydroxysteroid dehydrogenase (3β-HSD), also known as HSD3B1 or HSD3B2, is a bifunctional enzyme that plays a crucial role in the synthesis of all classes of hormonal steroids. Two human 3β-HSD proteins, designated type I (3β-HSD) and type II (3β-HSD2), are expressed by different genes and function in different areas of the body. Localized to the membrane of the endoplasmic reticulum (ER) and expressed in skin and placenta, 3β-HSD is the type I protein that catalyzes the oxidative conversion of 5-ene-3β-hydroxy steroid, as well as the conversion of various ketosteroids. Defects in the gene encoding 3β-HSD are associated with classic salt wasting, genital ambiguity, hypogonadism, insulin-resistant polycystic ovary syndrome (PCOS) and an increased susceptibility to prostate cancer. Additionally, congenital deficiency of 3β-HSD activity results in a severe depletion of steroid formation which can be lethal in young children.

**CHROMOSOMAL LOCATION**

Genetic locus: HSD3B1/HSD3B2 (human) mapping to 1p12; Hsd3b1/ Hsd3b2 (mouse) mapping to 3 F2.2.

**SOURCE**

3β-HSD (P-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of 3β-HSD of human origin.

**PRODUCT**

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-30820 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

**APPLICATIONS**

3β-HSD (P-18) is recommended for detection of 3β-HSD and 3β-HSD2 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); may cross-react with 3β-HSD3-6 of mouse and rat origin.

3β-HSD (P-18) is also recommended for detection of 3β-HSD and 3β-HSD2 in additional species, including equine, canine, bovine and porcine.

Molecular Weight of 3β-HSD: 42 kDa.

Positive Controls: rat adrenal gland extract: sc-364802, CCD-1064Sk cell lysate: sc-2263 or mouse testis extract: sc-2405.

**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.

**DATA**


**SELECT PRODUCT CITATIONS**

Try **3β-HSD (A-1): sc-515120** or **3β-HSD (37-2): sc-100466**, our highly recommended monoclonal antibodies to 3β-HSD (P-18). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **3β-HSD (A-1): sc-51520**.