SANTA CRUZ BIOTECHNOLOGY, INC.

CYP19 (H-300): sc-30086

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

P450 enzymes constitute a family of monooxygenase enzymes that are involved in the metabolism of a wide array of endogenous and xenobiotic compounds. P450 enzymes can be classified, based on their sequence similarities, into distinct subfamilies, which include CYP1A and CYP2A. Other P450 family members include CYP19, also designated aromatase (P450arom), which catalyzes the conversion of C19 steroids to estrogens in various tissues, including placenta, gonads, adipose tissue, skin and brain. CYP19 expression is controlled by hormonally regulated promoters in different tissues and increased CYP19 activity is associated with familial gynecomastia. Also, a polymorphic allele of CYP19 (repeat (TTTA)12) is present in a majority of breast cancer patients. P450 cholesterol 7α-hydroxylase, CYP7A1, is the rate-limiting enzyme of bile acid synthesis in the liver, and its expression is mediated by the bile acid receptor FXR. CYP27A1 catalyzes vitamin D_3 25-hydroxylation and is localized to the mitochondria in kidney and liver.

CHROMOSOMAL LOCATION

Genetic locus: CYP19A1 (human) mapping to 15q21.2; Cyp19a1 (mouse) mapping to 9 A5.3.

SOURCE

CYP19 (H-300) is a rabbit polyclonal antibody raised against amino acids 209-503 mapping at the C-terminus of CYP19 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.

APPLICATIONS

CYP19 (H-300) is recommended for detection of CYP19 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).

CYP19 (H-300) is also recommended for detection of CYP19 in additional species, including canine and bovine.

Suitable for use as control antibody for CYP19 siRNA (h): sc-41498, CYP19 siRNA (m): sc-41499, CYP19 shRNA Plasmid (h): sc-41498-SH, CYP19 shRNA Plasmid (m): sc-41499-SH, CYP19 shRNA (h) Lentiviral Particles: sc-41498-V and CYP19 shRNA (m) Lentiviral Particles: sc-41499-V.

Molecular Weight (predicted) of CYP19: 58 kDa.

Molecular Weight (observed) of CYP19: 50 kDa.

Positive Controls: human adipose tissue extract: sc-363750, HL-60 whole cell lysate: sc-2209 or Jurkat whole cell lysate: sc-2204.

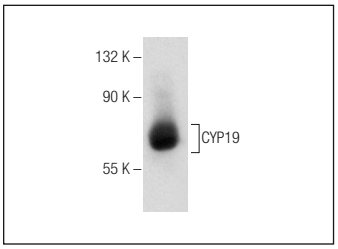
RESEARCH USE

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

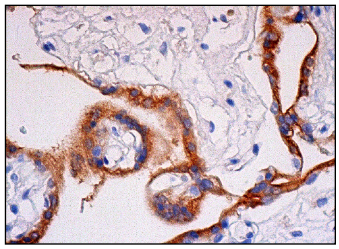
STORAGE

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

DATA



CYP19 (H-300): sc-30086. Western blot analysis of CYP19 expression in human adipose tissue extract.



CYP19 (H-300): sc-30086. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells.

SELECT PRODUCT CITATIONS

1. Tinfo, N.S., et al. 2011. Understanding the effects of atrazine on steroidogenesis in rat granulosa and H295R adrenal cortical carcinoma cells. Reprod. Toxicol. 31: 184-193.
2. Blomberg Jensen, M., et al. 2013. Characterization of the testicular, epididymal and endocrine phenotypes in the Leuven Vdr-deficient mouse model: targeting estrogen signalling. Mol. Cell. Endocrinol. 377: 93-102.
3. Gibson, D.A., et al. 2013. Endometrial Intracrinology—generation of an estrogen-dominated microenvironment in the secretory phase of women. J. Clin. Endocrinol. Metab. 98: E1802-E1806.
4. Santillo, A., et al. 2014. D-aspartate affects NMDA receptor-extracellular signal-regulated kinase pathway and upregulates androgen receptor expression in the rat testis. Theriogenology 81: 744-751.

PROTOCOLS

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