

# CYP27A1 (H-117): sc-292976

## 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 aromatase activity is associated with familial gynecomastia. Also, a polymorphic allele of CYP19 (repeat (TTTA)<sub>12</sub>) is present in a majority of breast cancer patients. P450 cholesterol 7 $\alpha$ -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<sub>3</sub> 25-hydroxylation and is localized to the mitochondria in kidney and liver.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: CYP27A1 (human) mapping to 2q35; Cyp27a1 (mouse) mapping to 1 C3.

## SOURCE

CYP27A1 (H-117) is a rabbit polyclonal antibody raised against amino acids 335-451 mapping within an internal region of CYP27A1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

CYP27A1 (H-117) is recommended for detection of CYP27A1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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).

CYP27A1 (H-117) is also recommended for detection of CYP27A1 in additional species, including equine and canine.

Suitable for use as control antibody for CYP27A1 siRNA (h): sc-41500, CYP27A1 siRNA (m): sc-41501, CYP27A1 shRNA Plasmid (h): sc-41500-SH, CYP27A1 shRNA Plasmid (m): sc-41501-SH, CYP27A1 shRNA (h) Lentiviral Particles: sc-41500-V and CYP27A1 shRNA (m) Lentiviral Particles: sc-41501-V.

Molecular Weight of CYP27A1: 60 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **CYP27A1 (G-2): sc-390974** or **CYP27A1 (D-12): sc-393222**, our highly recommended monoclonal alternatives to CYP27A1 (H-117).