SANTA CRUZ BIOTECHNOLOGY, INC.

CYP7B1 (N-17): sc-26087

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 including cholesterol. CYP8B1 moderates the ratio of cholic acid over chenodeoxycholic acid to control the solubility of cholesterol. P450 cholesterol 7-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. CYP7B1 (oxysterol 7-α-hydroxylase) functions as an enzyme in the alternate bile acid synthesis pathway. Specifically, CYP7B1 metabolizes 25- and 27-hydroxycholesterol. The gene encoding human CYP7B1 maps to chromosome 8q12.3. Mutations in the CYP7B1 gene may cause a metabolic defect in bile acid synthesis characterized by elevated urinary bile acid excretion, severe cholestasis, cirrhosis and liver synthetic failure.

REFERENCES

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2. Peterson, J.A., Sevrioukova, I., Truan, G. and Graham-Lorence, S.E. 1997. P450BM-3; a tale of two domains—or is it three? Steroids 62: 117-123.
3. Setchell, K.D., Schwarz, M., O'Connell, N.C., Lund, E.G., Davis, D.L., Lathe, R., Thompson, H.R., Weslie Tyson, R., Sokol, R.J. and Russell, D.W. 1998. Identification of a new inborn error in bile acid synthesis: mutation of the oxysterol 7α-hydroxylase gene causes severe neonatal liver disease. J. Clin. Invest. 102: 1690-1703.
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CHROMOSOMAL LOCATION

Genetic locus: CYP7B1 (human) mapping to 8q12.3; Cyp7b1 (mouse) mapping to 3 A1.

SOURCE

CYP7B1 (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of CYP7B1 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-26087 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

CYP7B1 (N-17) is recommended for detection of CYP7B1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

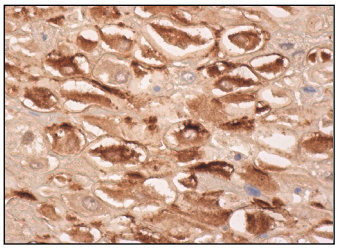
Suitable for use as control antibody for CYP7B1 siRNA (h): sc-41492, CYP7B1 siRNA (m): sc-41493, CYP7B1 shRNA Plasmid (h): sc-41492-SH, CYP7B1 shRNA Plasmid (m): sc-41493-SH, CYP7B1 shRNA (h) Lentiviral Particles: sc-41492-V and CYP7B1 shRNA (m) Lentiviral Particles: sc-41493-V.

Molecular Weight of CYP7B1: 58 kDa.

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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



CYP7B1 (N-17): sc-26087. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **CYP7B1 (WW-H9): sc-134309**, our highly recommended monoclonal alternative to CYP7B1 (N-17).