

CYP8B1 (P-18): sc-23515

BACKGROUND

CYP8B1 (sterol 12 α -hydroxylase) is a member of the cytochrome P450 superfamily of monooxygenase enzymes that are involved in the metabolism of a wide array of endogenous and xenobiotic compounds. CYP8B1 is highly expressed in liver and is an important enzyme for bile acid synthesis. Specifically, CYP8B1 moderates the ratio of cholic acid over chenodeoxycholic acid to control the solubility of cholesterol. The gene encoding human CYP8B1 maps to chromosome 3p22.1. The CYP8B1 gene encodes a 501 amino acid protein and does not contain any introns. The CYP8B1 gene promoter is transactivated by hepatocyte nuclear factor 4 α . In mice, disruption of the CYP8B1 gene prevents the synthesis of cholate, which is a primary bile acid.

REFERENCES

1. Eggertsen, G., et al. 1996. Molecular cloning and expression of rabbit sterol 12 α -hydroxylase. *J. Biol. Chem.* 271: 32269-32275.
2. Peterson, J.A., et al. 1997. P450BM-3; a tale of two domains—or is it three? *Steroids* 62: 117-123.
3. Gafvels, M., et al. 1999. Structure and chromosomal assignment of the sterol 12 α -hydroxylase gene (CYP8B1) in human and mouse: eukaryotic cytochrome P450 gene devoid of introns. *Genomics* 56: 184-196.
4. Zhang, M. and Chiang, J.Y. 2001. Transcriptional regulation of the human sterol 12 α -hydroxylase gene (CYP8B1): roles of hepatocyte nuclear factor 4 α in mediating bile acid repression. *J. Biol. Chem.* 276: 41690-41699.
5. Li-Hawkins, J., et al. 2002. Cholic acid mediates negative feedback regulation of bile acid synthesis in mice. *J. Clin. Invest.* 110: 1191-1200.

CHROMOSOMAL LOCATION

Genetic locus: CYP8B1 (human) mapping to 3p22.1; Cyp8b1 (mouse) mapping to 9 F4.

SOURCE

CYP8B1 (P-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CYP8B1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-23515 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

CYP8B1 (P-18) is recommended for detection of CYP8B1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CYP8B1 (P-18) is also recommended for detection of CYP8B1 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for CYP8B1 siRNA (h): sc-41494, CYP8B1 siRNA (m): sc-41495, CYP8B1 shRNA Plasmid (h): sc-41494-SH, CYP8B1 shRNA Plasmid (m): sc-41495-SH, CYP8B1 shRNA (h) Lentiviral Particles: sc-41494-V and CYP8B1 shRNA (m) Lentiviral Particles: sc-41495-V.

Molecular Weight of CYP8B1: 57 kDa.

Positive Controls: rat brain extract: sc-2392, c4 whole cell lysate: sc-364186 or mouse liver extract: sc-2256.

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.

SELECT PRODUCT CITATIONS

1. Matak, C., et al. 2007. Compromised intestinal lipid absorption in mice with a liver-specific deficiency of liver receptor homolog 1. *Mol. Cell. Biol.* 27: 8330-8339.
2. Wang, J., et al. 2007. Differential hepatocellular zonation pattern of cholesterol 7 α -hydroxylase (Cyp7a1) and sterol 12 α -hydroxylase (Cyp8b1) in the mouse. *Histochem. Cell Biol.* 127: 253-261.

RESEARCH USE

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



Try **CYP8B1 (M15-P3B7): sc-101387**, our highly recommended monoclonal alternative to CYP8B1 (P-18).