SANTA CRUZ BIOTECHNOLOGY, INC.

CYP8B1 (M15-P3B7): sc-101387

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 4α. In mice, disruption of the CYP8B1 gene prevents the synthesis of cholate, which is a primary bile acid.

CHROMOSOMAL LOCATION

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

SOURCE

CYP8B1 (M15-P3B7) is a mouse monoclonal antibody raised against a synthetic peptide corresponding to amino acids 486-494 of CYP8B1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CYP8B1 (M15-P3B7) is available conjugated to agarose (sc-101387 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-101387 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-101387 PE), fluorescein (sc-101387 FITC), Alexa Fluor® 488 (sc-101387 AF488), Alexa Fluor® 546 (sc-101387 AF546), Alexa Fluor® 594 (sc-101387 AF594) or Alexa Fluor® 647 (sc-101387 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-101387 AF680) or Alexa Fluor® 790 (sc-101387 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CYP8B1 (M15-P3B7) 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), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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: human liver microsomes cell extract.

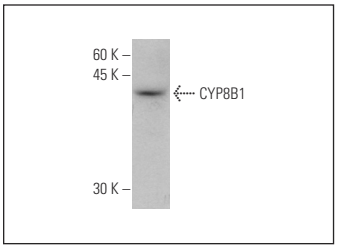
STORAGE

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



CYP8B1 (M15-P3B7): sc-101387. Western blot analysis of CYP8B1 expression in human liver microsomes cell extract.

SELECT PRODUCT CITATIONS

1. Lake, A.D., et al. 2013. Decreased hepatotoxic bile acid composition and altered synthesis in progressive human nonalcoholic fatty liver disease. Toxicol. Appl. Pharmacol. 268: 132-140.
2. Liu, J., et al. 2013. Oleanolic acid alters bile acid metabolism and produces cholestatic liver injury in mice. Toxicol. Appl. Pharmacol. 272: 816-824.
3. Kong, Y., et al. 2018. Protective effects of yangonin from an edible botanical Kava against lithocholic acid-induced cholestasis and hepatotoxicity. Eur. J. Pharmacol. 824: 64-71.
4. Pocaterra, A., et al. 2019. F-Actin dynamics regulates mammalian organ growth and cell fate maintenance. J. Hepatol. 71: 130-142.
5. Cai, J., et al. 2020. The reabsorption of bile acids regulated by FXR-OATP1A2 is the main factor for the formation of cholesterol gallstone. Am. J. Physiol. Gastrointest. Liver Physiol. 319: G303-G308.
6. Wang, L., et al. 2021. Disordered farnesoid X receptor signaling is associated with liver carcinogenesis in Abcb11-deficient mice. J. Pathol. 255: 412-424.
7. Li, X., et al. 2022. Kaempferol acts on bile acid signaling and gut microbiota to attenuate the tumor burden in $Apc^{Min/+}$ mice. Eur. J. Pharmacol. 918: 174773.
8. Wang, R., et al. 2022. Inulin activates FXR-FGF15 signaling and further increases bile acids excretion in non-alcoholic fatty liver disease mice. Biochem. Biophys. Res. Commun. 600: 156-162.
9. Fu, Y., et al. 2022. Alisol B 23-acetate adjusts bile acid metabolisim via hepatic FXR-BSEP signaling activation to alleviate atherosclerosis. Phytomedicine 101: 154120.

PROTOCOLS

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