BACKGROUND

In animals, P450 enzymes serve two major functions: biosynthesis of steroids, fatty acids and bile acids; and the metabolism of endogenous and a wide variety of exogenous substrates, such as toxins and drugs. The four major families involved in drug metabolism are CYP 1, 2, 3 and 4. The hepatic CYP4A enzymes are important fatty acid and prostaglandin omega-hydroxylases that are highly inducible by fibric acid hypolipidemic agents and other peroxisome proliferators. In humans, 4A1, 4A2 and 4A3 have been cloned from liver, kidney and testis and are detected in renal, hepatic and brain microvessels.

CHROMOSOMAL LOCATION

Genetic locus: CYP4A11 (human) mapping to 1p33; Cyp 4a14 (mouse) mapping to 4D1.

SOURCE

CYP4A1 (clo1) is a mouse monoclonal antibody raised against liver Cytochrome P450 P450 2C11 and 4A1 of rat origin.

PRODUCT

Each vial contains 200 µg IgG κ light chain in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

CYP4A1 (clo1) is available conjugated to agarose (sc-53248 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53248 HRP), 200 µg/ml, for WB, IHCP and ELISA; to either phycoerythrin (sc-53248 PE), fluorescein (sc-53248 FITC), Alexa Fluor® 488, Alexa Fluor® 594 (sc-53248 AF594) or Alexa Fluor® 647 (sc-53248 AF647), 200 µg/ml, for IF, IHCP and FCM; and to either Alexa Fluor® 680 (sc-53248 AF680) or Alexa Fluor® 647 (sc-53248 AF647), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

CYP4A1 (clo1) is recommended for detection of CYP4A1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)).

Suitable for use as control antibody for CYP4A1 siRNA (h): sc-88588, CYP4A14 siRNA (m): sc-142723, CYP4A11 shRNA Plasmid (h): sc-88588-SH, CYP4A14 shRNA Plasmid (m): sc-142723-SH, CYP4A11 shRNA (h) Lentiviral Particles: sc-88588-V and CYP4A14 shRNA (m) Lentiviral Particles: sc-142723-V.

CYP4A11 siRNA (h): sc-88588, and .

Molecular Weight of CYP4A1: 50 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, rat kidney extract: sc-2394 or rat liver extract: sc-2395.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κBP-HRP: sc-516102 or m-IgG κBP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA

SELECT PRODUCT CITATIONS


RESEARCH USE

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

PROTOCOLS

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