

CYP2B10 (9.14): sc-73546

BACKGROUND

The cytochrome P450 (CYP2) superfamily is one of three enzyme systems which metabolize the fatty acid arachadonic acid (AA) to vascular tone regulators. CYP2 are monooxygenase enzymes that require several cofactors such as nicotinamide adenine dinucleotide phosphate (NADPH) and P450 reductase. Epoxygenases are members of the CYP2 family that metabolize AA to epoxy-eicosatrienoic acid, and omega-hydroxylases are members of the CYP2 family that produce 19- and 20-hydroxyeicosatetraenoic acids. The CYP2 family members are part of the microsomal drug metabolizing system responsible for oxidation of many therapeutic agents as well as steroids, fatty acids and many other endogenous substances. CYP2B10 is a member of the CYP2 family that comprise the major phenobarbital-inducible hepatic cytochromes P450s.

CHROMOSOMAL LOCATION

Genetic locus: *Cyp2b10* (mouse) mapping to 7 A3.

SOURCE

CYP2B10 (9.14) is a mouse monoclonal antibody raised against liver cytochrome P4502B1 and 2B2 of rat origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CYP2B10 (9.14) is recommended for detection of CYP2B10 of mouse origin, and CYP2B1 and CYP2B2 of rat 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of CYP2B10: 50 kDa.

Positive Controls: rat liver extract: sc-2395 or mouse liver extract: sc-2256.

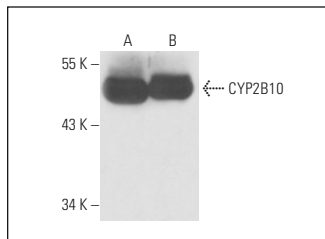
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-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). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

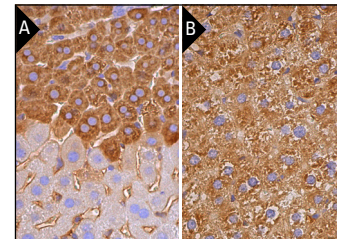
STORAGE

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

DATA



CYP2B10 (9.14): sc-73546. Western blot analysis of CYP2B10 expression in rat liver (A) and mouse liver (B) tissue extracts.



CYP2B10 (9.14): sc-73546. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse liver tissue showing cytoplasmic staining of hepatocytes and hepatic sinusoidal cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat liver tissue showing cytoplasmic staining of hepatocytes (B).

SELECT PRODUCT CITATIONS

- Alanazi, M.S., et al. 2010. Molecular characterization of the *Camelus dromedarius* putative cytochrome P450s genes. *Protein J.* 29: 306-313.
- Roos, R., et al. 2011. Hepatic effects of a highly purified 2,2',3,4,4',5,5'-heptachlorobiphenyl (PCB 180) in male and female rats. *Toxicology* 284: 42-53.
- Krolewski, R.C., et al. 2013. Global expression profiling of globose basal cells and neurogenic progression within the olfactory epithelium. *J. Comp. Neurol.* 521: 833-859.
- Vichi, S., et al. 2015. Cell type-specific expression and localization of cytochrome P450 isoforms in tridimensional aggregating rat brain cell cultures. *Toxicol. In Vitro* 30: 176-184.
- Shi, C., et al. 2017. Peroxisome proliferator-activated receptor α activation suppresses cytochrome P450 induction potential in mice treated with Gemfibrozil. *Basic Clin. Pharmacol. Toxicol.* 121: 169-174.
- Luo, M., et al. 2017. Species-related exposure of phase II metabolite gemfibrozil 1-O- β -glucuronide between human and mice: a net induction of mouse P450 activity was revealed. *Biopharm. Drug Dispos.* 38: 535-542.
- Dovrtelova, G., et al. 2018. Effect of endocannabinoid oleamide on rat and human liver cytochrome P450 enzymes in *in vitro* and *in vivo* models. *Drug Metab. Dispos.* 46: 913-923.
- Wei, Y., et al. 2018. Generation and characterization of a CYP2C11-null rat model by using the CRISPR/Cas9 method. *Drug Metab. Dispos.* 46: 525-531.
- Zhou, H., et al. 2019. CYP2D1 gene knockout reduces the metabolism and efficacy of venlafaxine in rats. *Drug Metab. Dispos.* 47: 1425-1432.

RESEARCH USE

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