

CYP2U1 (B-5): sc-393071

BACKGROUND

P450 enzymes constitute a family of monooxygenase enzymes that are involved in the metabolism of a wide array of endogenous and xenobiotic compounds. There are currently 57 known active cytochrome P450 (CYP) genes and 58 known pseudogenes present in the human genome. Several P450 enzymes have been classified by sequence similarities as members of the CYP1A and CYP2A subfamilies. CYP2U1 is a 544 amino acid protein that belongs to the CYP2 family of cytochrome P450 proteins. These proteins are usually involved in the metabolism of foreign compounds. CYP2U1 metabolizes arachidonic acid, docosahexaenoic acid and other long chain fatty acids. CYP2U1 may be involved in modulating the arachidonic acid signaling pathway in the cerebellum and thymus.

REFERENCES

1. Chuang, S.S., et al. 2004. CYP2U1, a novel human thymus- and brain-specific cytochrome P450, catalyzes ω - and ω -1-hydroxylation of fatty acids. *J. Biol. Chem.* 279: 6305-6314.
2. Choudhary, D., et al. 2005. Expression patterns of mouse and human CYP orthologs (families 1-4) during development and in different adult tissues. *Arch. Biochem. Biophys.* 436: 50-61.
3. Ingelman-Sundberg, M. 2005. The human genome project and novel aspects of cytochrome P450 research. *Toxicol. Appl. Pharmacol.* 207: 52-56.
4. Karlgren, M., et al. 2005. Novel extrahepatic cytochrome P450s. *Toxicol. Appl. Pharmacol.* 207: 57-61.

CHROMOSOMAL LOCATION

Genetic locus: CYP2U1 (human) mapping to 4q25; Cyp2u1 (mouse) mapping to 3 G3.

SOURCE

CYP2U1 (B-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 9-24 at the N-terminus of CYP2U1 of human origin.

PRODUCT

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

CYP2U1 (B-5) is available conjugated to agarose (sc-393071 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393071 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393071 PE), fluorescein (sc-393071 FITC), Alexa Fluor® 488 (sc-393071 AF488), Alexa Fluor® 546 (sc-393071 AF546), Alexa Fluor® 594 (sc-393071 AF594) or Alexa Fluor® 647 (sc-393071 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393071 AF680) or Alexa Fluor® 790 (sc-393071 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393071 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

CYP2U1 (B-5) is recommended for detection of CYP2U1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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 CYP2U1 siRNA (h): sc-60485, CYP2U1 siRNA (m): sc-60486, CYP2U1 shRNA Plasmid (h): sc-60485-SH, CYP2U1 shRNA Plasmid (m): sc-60486-SH, CYP2U1 shRNA (h) Lentiviral Particles: sc-60485-V and CYP2U1 shRNA (m) Lentiviral Particles: sc-60486-V.

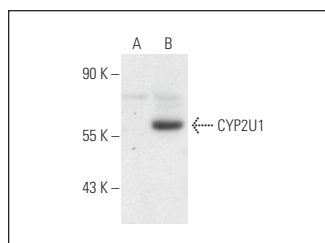
Molecular Weight of CYP2U1: 55 kDa.

Positive Controls: CYP2U1 (h2): 293T Lysate: sc-372725.

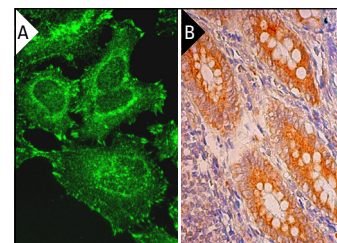
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CYP2U1 (B-5): sc-393071. Western blot analysis of CYP2U1 expression in non-transfected: sc-117752 (A) and human CYP2U1 transfected: sc-372725 (B) 293T whole cell lysates.



CYP2U1 (B-5): sc-393071. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic and membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human appendix tissue showing cytoplasmic staining of glandular cells (B).

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.