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CYP2B6 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11104C

Product Information

Application	WB, IHC-P, IF, E
Primary Accession	P20813
Other Accession	NP_000758.1
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB16992
Calculated MW	56278
Antigen Region	235-263

Additional Information

Gene ID	1555
Other Names	Cytochrome P450 2B6, 11413-, 4-cineole 2-exo-monooxygenase, CYPIIB6, Cytochrome P450 IIB1, CYP2B6
Target/Specificity	This CYP2B6 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 235-263 amino acids from the Central region of human CYP2B6.
Dilution	WB~~1:1000 IHC-P~~1:100~500 IF~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CYP2B6 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CYP2B6 {ECO:0000303|PubMed:21289075, ECO:0000312|HGNC:HGNC:2615}
Function	A cytochrome P450 monooxygenase involved in the metabolism of

	endocannabinoids and steroids (PubMed:12865317, PubMed:21289075). Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate, and reducing the second into a water molecule, with two electrons provided by NADPH via cytochrome P450 reductase (NADPH-- hemoprotein reductase). Catalyzes the epoxidation of double bonds of arachidonoylethanolamide (anandamide) to 8,9-, 11,12-, and 14,15-epoxyeicosatrienoic acid ethanolamides (EpETrE-EAs), potentially modulating endocannabinoid system signaling (PubMed:21289075). Hydroxylates steroid hormones, including testosterone at C-16 and estrogens at C-2 (PubMed:12865317, PubMed:21289075). Plays a role in the oxidative metabolism of xenobiotics, including plant lipids and drugs (PubMed:11695850, PubMed:22909231). Acts as a 1,4-cineole 2-exo-monooxygenase (PubMed:11695850).
Cellular Location	Endoplasmic reticulum membrane; Peripheral membrane protein. Microsome membrane; Peripheral membrane protein
Tissue Location	Expressed in liver, lung and heart right ventricle.

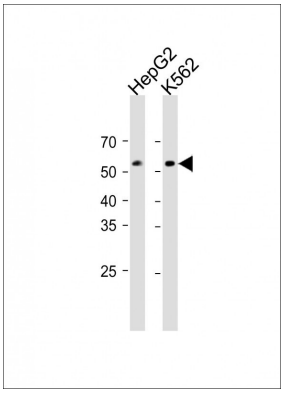
Background

This gene, CYP2B6, encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. This protein localizes to the endoplasmic reticulum and its expression is induced by phenobarbital. The enzyme is known to metabolize some xenobiotics, such as the anti-cancer drugs cyclophosphamide and ifosphamide. Transcript variants for this gene have been described; however, it has not been resolved whether these transcripts are in fact produced by this gene or by a closely related pseudogene, CYP2B7. Both the gene and the pseudogene are located in the middle of a CYP2A pseudogene found in a large cluster of cytochrome P450 genes from the CYP2A, CYP2B and CYP2F subfamilies on chromosome 19q.

References

Figueroa, S.C., et al. Ther Drug Monit 32(5):579-585(2010)
Chou, M., et al. Antimicrob. Agents Chemother. 54(10):4432-4439(2010)
Shimada, M., et al. Hum. Genet. 128(4):433-441(2010)
Bunten, H., et al. Clin. Pharmacol. Ther. 88(3):383-389(2010)
Gounden, V., et al. AIDS Res Ther 7, 32 (2010) :

Images



All lanes: Anti-CYP2B6 Antibody (Center) at 1:1000 dilution Lane 1: HepG2 whole cell lysate Lane 2: K562 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 56 KDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Characterization of feline cytochrome P450 2B6.
- The role of cytochromes p450 and aldo-keto reductases in prognosis of breast carcinoma patients.