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CYP2D6 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14520A

Product Information

Application	IHC-P, WB, E
Primary Accession	P10635
Other Accession	P12939, P10633
Reactivity	Human
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB34345
Calculated MW	55769
Antigen Region	76-105

Additional Information

Gene ID	1565
Other Names	Cytochrome P450 2D6, CYPIID6, Cytochrome P450-DB1, Debrisoquine 4-hydroxylase, CYP2D6, CYP2DL1
Target/Specificity	This CYP2D6 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 76-105 amino acids from the N-terminal region of human CYP2D6.
Dilution	IHC-P~~1:100~500 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. 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	CYP2D6 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CYP2D6 {ECO:0000303|PubMed:21289075, ECO:0000312|HGNC:HGNC:2625}
Function	A cytochrome P450 monooxygenase involved in the metabolism of fatty

	acids, steroids and retinoids (PubMed:18698000, PubMed:19965576, PubMed:20972997, PubMed:21289075, PubMed:21576599). 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) (PubMed:18698000, PubMed:19965576, PubMed:20972997, PubMed:21289075, PubMed:21576599). Catalyzes the epoxidation of double bonds of polyunsaturated fatty acids (PUFA) (PubMed:19965576, PubMed:20972997). Metabolizes endocannabinoid arachidonoylethanolamide (anandamide) to 20-hydroxyeicosatetraenoic acid ethanolamide (20-HETE-EA) and 8,9-, 11,12-, and 14,15-epoxyeicosatrienoic acid ethanolamides (EpETrE-EAs), potentially modulating endocannabinoid system signaling (PubMed:18698000, PubMed:21289075). Catalyzes the hydroxylation of carbon-hydrogen bonds. Metabolizes cholesterol toward 25-hydroxycholesterol, a physiological regulator of cellular cholesterol homeostasis (PubMed:21576599). Catalyzes the oxidative transformations of all-trans retinol to all-trans retinal, a precursor for the active form all-trans-retinoic acid (PubMed:10681376). Also involved in the oxidative metabolism of drugs such as antiarrhythmics, adrenoceptor antagonists, and tricyclic antidepressants.
Cellular Location	Endoplasmic reticulum membrane; Peripheral membrane protein. Microsome membrane; Peripheral membrane protein

Background

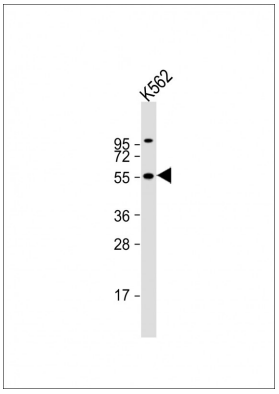
This gene encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. This protein localizes to the endoplasmic reticulum and is known to metabolize as many as 20% of commonly prescribed drugs. Its substrates include debrisoquine, an adrenergic-blocking drug; sparteine and propafenone, both anti-arrythmic drugs; and amitryptiline, an anti-depressant. The gene is highly polymorphic in the population; certain alleles result in the poor metabolizer phenotype, characterized by a decreased ability to metabolize the enzyme's substrates. The gene is located near two cytochrome P450 pseudogenes on chromosome 22q13.1. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.

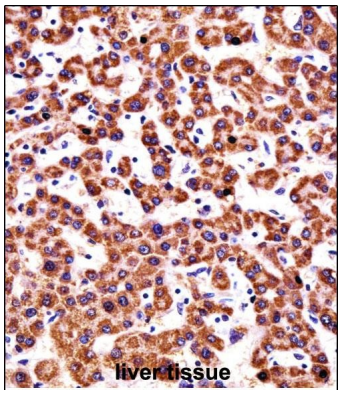
References

Abduljalil, K., et al. Clin. Pharmacol. Ther. 88(5):643-651(2010)
Novalbos, J., et al. J Clin Psychopharmacol 30(5):504-511(2010)
Thompson, A.M., et al. Breast Cancer Res. Treat. (2010) In press :
Gonzalez-Tejera, G., et al. P R Health Sci J 29(3):299-304(2010)
Abraham, J.E., et al. Breast Cancer Res. 12 (4), R64 (2010) :

Images

Anti-CYP2D6 Antibody (N-term) at 1:1000 dilution + K562 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 56 kDa Blocking/Dilution buffer: 5% NFDM/TBST.





CYP2D6 Antibody (N-term) (AP14520a)immunohistochemistry analysis in formalin fixed and paraffin embedded human liver tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of CYP2D6 Antibody (N-term) for immunohistochemistry. Clinical relevance has not been evaluated.

Citations

- Comparison of Paeoniflorin and Albiflorin on Human CYP3A4 and CYP2D6.