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Anti-Cytochrome P450 2D6 Antibody

Catalog # AP51914

Product Information

Application	WB, IHC, IF/IC
Primary Accession	P10635
Reactivity	Human, Mouse, Rat, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	55769

Additional Information

Gene ID	1565
Other Names	CYP2DL1; Cytochrome P450 2D6; CYPIID6; Cytochrome P450-DB1; Debrisoquine 4-hydroxylase
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human Cytochrome P450 2D6. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

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

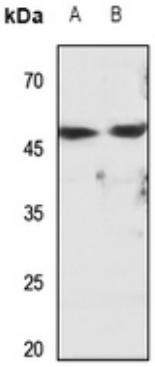
(PubMed:18698000, PubMed:21289075). Catalyzes the hydroxylation of carbon-hydrogen bonds. Metabolizes cholesterol toward 25-hydroxycholesterol, a physiological regulator of cellular cholesterol homeostasis (PubMed:21576599). Catalyzes the oxidative transformations of all-trans retinol to all-trans retinal, 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

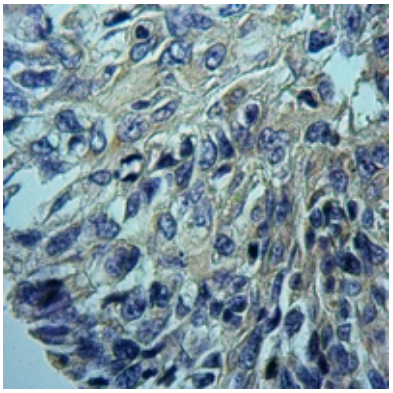
References

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Gaedigk A.,et al.Pharmacogenomics J. 5:173-182(2005).
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Images

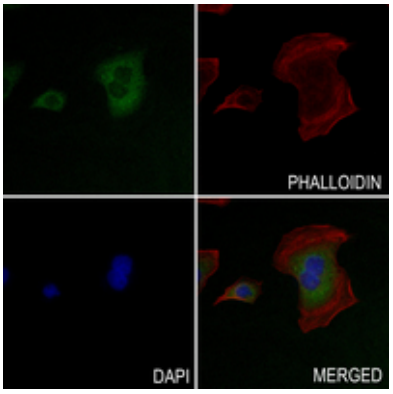


Western blot analysis of Cytochrome P450 2D6 expression in mouse liver (A), rat liver (B) whole cell lysates. (Predicted band size: 55 kD; Observed band size: 55 kD)



Immunohistochemical analysis of Cytochrome P450 2D6 staining in rat heart formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Immunofluorescent analysis of Cytochrome P450 2D6 staining in MCF7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody



(green) in PBS at room temperature in the dark.
Phalloidin - AF594 was used to stain Actin filaments (red).
DAPI was used to stain the cell nuclei (blue).

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