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CYP2J2 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7450a

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	P51589
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB15781
Calculated MW	57611
Antigen Region	96-124

Additional Information

Gene ID	1573
Other Names	Cytochrome P450 2J2, Arachidonic acid epoxygenase, CYPIIJ2, CYP2J2
Target/Specificity	This CYP2J2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 96-124 amino acids from the N-terminal region of human CYP2J2.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	CYP2J2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CYP2J2 {ECO:0000303|PubMed:19737933, ECO:0000312|HGNC:HGNC:2634}
Function	A cytochrome P450 monooxygenase involved in the metabolism of polyunsaturated fatty acids (PUFA) in the cardiovascular system (PubMed:19965576, PubMed:8631948). 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:19965576, PubMed:8631948). Catalyzes the epoxidation of double bonds of PUFA (PubMed:19965576, PubMed:8631948). Converts arachidonic acid to four regioisomeric epoxyeicosatrienoic acids (EpETrE), likely playing a major role in the epoxidation of endogenous cardiac arachidonic acid pools (PubMed:8631948). In endothelial cells, participates in eicosanoids metabolism by converting hydroperoxide species into hydroxy epoxy metabolites. In combination with 15- lipoxygenase metabolizes arachidonic acid and converts hydroperoxyicosatetraenoates (HpETEs) into hydroxy epoxy eicosatrienoates (HEETs), which are precursors of vasodilatory trihydroxyicosatrienoic acids (THETAs). This hydroperoxide isomerase activity is NADPH- and O2-independent (PubMed:19737933). Catalyzes the monooxygenation of a various xenobiotics, such as danazol, amiodarone, terfenadine, astemizole, thioridazine, tamoxifen, cyclosporin A and nabumetone (PubMed:19923256). Catalyzes hydroxylation of the anthelmintics albendazole and fenbendazole (PubMed:23959307). Catalyzes the sulfoxidation of fenbedazole (PubMed:19923256).

Cellular Location Endoplasmic reticulum membrane; Peripheral membrane protein. Microsome membrane; Peripheral membrane protein

Tissue Location Highly expressed in heart, present at lower levels in liver, kidney and skeletal muscle (at protein level)

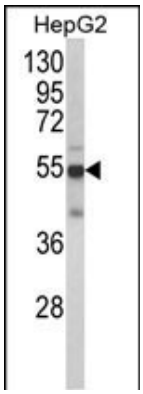
Background

CYP2J2 is 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 thought to be the predominant enzyme responsible for epoxidation of endogenous arachidonic acid in cardiac tissue.

References

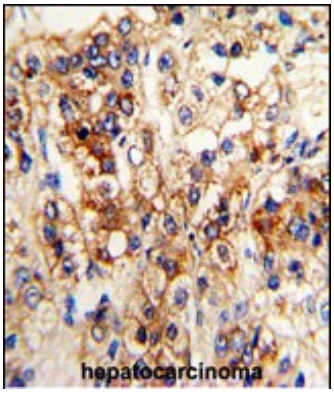
Wu S., Moomaw C.R., Tomer K.B.J. Biol. Chem. 271:3460-3468(1996)
King L.M., Ma J., Srettabunjong S.Mol. Pharmacol. 61:840-852(2002)

Images

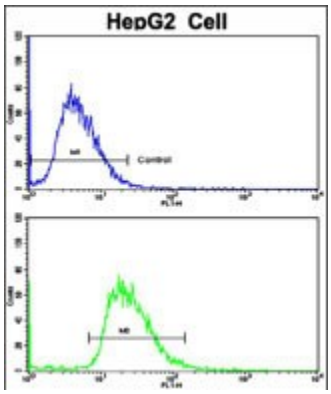


Western blot analysis of CYP2J2 Antibody (N-term) (Cat. #AP7450a) in HepG2 cell line lysates (35ug/lane). CYP2J2 (arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human hepatocarcinoma reacted with CYP2J2 Antibody (N-term), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data



demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow cytometric analysis of HepG2 cells using CYP2J2 Antibody (N-term)(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- Insights into the metabolic characteristics of aminopropanediol analogues of SYLs as S1P modulators: from structure to metabolism

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.