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CYP2J2 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP7450c

Specification

CYP2J2 Antibody (Center) Blocking Peptide - Product Information

Primary Accession P51589

CYP2J2 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 1573

Other Names
Cytochrome P450 2J2, Arachidonic acid epoxygenase, CYPIIJ2, CYP2J2

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7450c was selected from the Center region of human CYP2J2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

CYP2J2 Antibody (Center) Blocking Peptide - 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:8631948, PubMed:19965576). 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:8631948, PubMed:19965576). Catalyzes the epoxidation of double bonds of PUFA (PubMed:8631948, PubMed:19965576). 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)

CYP2J2 Antibody (Center) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

CYP2J2 Antibody (Center) Blocking Peptide - Images

CYP2J2 Antibody (Center) Blocking Peptide - 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.

CYP2J2 Antibody (Center) Blocking Peptide - 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)