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CYP1A2 Antibody (Center) Blocking peptide
Synthetic peptide
Catalog # BP11325c

Specification

CYP1A2 Antibody (Center) Blocking peptide - Product Information

Primary Accession P05177

CYP1A2 Antibody (Center) Blocking peptide - Additional Information

Gene ID 1544

Other Names
Cytochrome P450 1A2, CYPIA2, Cytochrome P(3)450, Cytochrome P450 4, Cytochrome P450-P3, CYP1A2

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.

CYP1A2 Antibody (Center) Blocking peptide - Protein Information

Name CYP1A2 {ECO:0000303|PubMed:2575218, ECO:0000312|HGNC:HGNC:2596}

Function
A cytochrome P450 monooxygenase involved in the metabolism of various endogenous substrates, including fatty acids, steroid hormones and vitamins (PubMed:9435160, PubMed:10681376, PubMed:11555828, PubMed:12865317, 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:9435160, PubMed:10681376, PubMed:11555828, PubMed:12865317, PubMed:19965576). Catalyzes the hydroxylation of carbon-hydrogen bonds (PubMed:11555828, PubMed:<a

href="http://www.uniprot.org/citations/12865317" target="_blank">12865317). Exhibits high catalytic activity for the formation of hydroxyestrogens from estrone (E1) and 17beta- estradiol (E2), namely 2-hydroxy E1 and E2 (PubMed:11555828, PubMed:12865317). Metabolizes cholesterol toward 25-hydroxycholesterol, a physiological regulator of cellular cholesterol homeostasis (PubMed:21576599). May act as a major enzyme for all-trans retinoic acid biosynthesis in the liver. Catalyzes two successive oxidative transformation of all-trans retinol to all-trans retinal and then to the active form all-trans retinoic acid (PubMed:10681376). Primarily catalyzes stereoselective epoxidation of the last double bond of polyunsaturated fatty acids (PUFA), displaying a strong preference for the (R,S) stereoisomer (PubMed:19965576). Catalyzes bisallylic hydroxylation and omega-1 hydroxylation of PUFA (PubMed:9435160). May also participate in eicosanoids metabolism by converting hydroperoxide species into oxo metabolites (lipoxygenase-like reaction, NADPH- independent) (PubMed:21068195). Plays a role in the oxidative metabolism of xenobiotics. Catalyzes the N-hydroxylation of heterocyclic amines and the O-deethylation of phenacetin (PubMed:14725854). Metabolizes caffeine via N3-demethylation (Probable).

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

Tissue Location
Liver.

CYP1A2 Antibody (Center) Blocking peptide - Protocols

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

- Blocking Peptides

CYP1A2 Antibody (Center) Blocking peptide - Images

CYP1A2 Antibody (Center) Blocking peptide - Background

This gene encodes a member of the cytochrome P450superfamily of enzymes. The cytochrome P450 proteins aremonooxygenases which catalyze many reactions involved in drugmetabolism and synthesis of cholesterol, steroids and other lipids.The protein encoded by this gene localizes to the endoplasmicreticulum and its expression is induced by some polycyclic aromatichydrocarbons (PAHs), some of which are found in cigarette smoke.The enzyme's endogenous substrate is unknown; however, it is ableto metabolize some PAHs to carcinogenic intermediates. Otherxenobiotic substrates for this enzyme include caffeine, aflatoxinB1, and acetaminophen. The transcript from this gene contains fourAlu sequences flanked by direct repeats in the 3' untranslatedregion.

CYP1A2 Antibody (Center) Blocking peptide - References

Gentile, G., et al. J Headache Pain 11(5):431-435(2010)Uslu, A., et al. BMB Rep 43(8):530-534(2010)Wang, X., et al. J. Pharm. Pharmacol. 62(8):1077-1083(2010)Schmidt, R.J., et al. Birth Defects Res. Part A Clin. Mol. Teratol. 88(7):560-569(2010)Jiang, Z., et al. Pharmacogenet. Genomics 16(5):359-367(2006)