

CYP1A2 Rabbit pAb

Catalog # AP96982

Product Information

Application	WB
Primary Accession	P00186
Other Accession	P00186
Reactivity	Rat, Mouse
Predicted	Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	58184
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse CYP1A2
Epitope Specificity	451-513/513
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the cytochrome P450 family.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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. The protein encoded by this gene localizes to the endoplasmic reticulum and its expression is induced by some polycyclic aromatic hydrocarbons (PAHs), some of which are found in cigarette smoke. The enzyme's endogenous substrate is unknown; however, it is able to metabolize some PAHs to carcinogenic intermediates. Other xenobiotic substrates for this enzyme include caffeine, aflatoxin B1, and acetaminophen. The transcript from this gene contains four Alu region. [provided by RefSeq].sequences flanked by direct repeats in the 3' untranslated.

Additional Information

Gene ID	13077
Other Names	CP12; CYP1A2; P3-450; P450(PA); P450-3; CYPD45; P-450d; RATCYPD45; CP1A2_HUMAN; CYP1A2; Cholesterol 25-hydroxylase; Cytochrome P(3)450; Cytochrome P450 4; Cytochrome P450-P3; Hydroperoxy icosatetraenoate dehydratase; 1.14.14.1; CP1A2_MOUSE; Cytochrome P450-P2; Cyp1a-2; CP1A2_RAT; Cytochrome P-448; Cytochrome P-450d; Cytochrome P450-D; cytochrome P450 family 1 subfamily A member 2; cytochrome P450, subfamily I (aromatic compound-inducible), polypeptide 2; cytochrome P450, family 1, subfamily A, polypeptide 2
Dilution	WB=1:500-2000

Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
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Protein Information

Name	Cyp1a2
Synonyms	Cyp1a-2
Function	A cytochrome P450 monooxygenase involved in the metabolism of various endogenous substrates, including fatty acids, steroid hormones and vitamins. 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). Catalyzes the hydroxylation of carbon-hydrogen bonds. Exhibits high catalytic activity for the formation of hydroxyestrogens from estrone (E1) and 17beta-estradiol (E2), namely 2-hydroxy E1 and E2. Metabolizes cholesterol toward 25- hydroxycholesterol, a physiological regulator of cellular cholesterol homeostasis. 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. Primarily catalyzes stereoselective epoxidation of the last double bond of polyunsaturated fatty acids (PUFA), displaying a strong preference for the (R,S) stereoisomer. Catalyzes bisallylic hydroxylation and omega-1 hydroxylation of PUFA. May also participate in eicosanoids metabolism by converting hydroperoxide species into oxo metabolites (lipoxygenase- like reaction, NADPH-independent). Plays a role in the oxidative metabolism of xenobiotics. Catalyzes the N-hydroxylation of heterocyclic amines and the O-deethylation of phenacetin. Metabolizes caffeine via N3-demethylation.
Cellular Location	Endoplasmic reticulum membrane {ECO:0000250 UniProtKB:P05177}; Peripheral membrane protein {ECO:0000250 UniProtKB:P05177}. Microsome membrane {ECO:0000250 UniProtKB:P05177}; Peripheral membrane protein {ECO:0000250 UniProtKB:P05177}

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