

Product Name: CYP1A2 Rabbit Polyclonal Antibody
Catalog #: APRab09630



Summary

Production Name	CYP1A2 Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	IHC,ELISA
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	CYP1A2
Alternative Names	CYP1A2; Cytochrome P450 1A2; CYPIA2; Cytochrome P(3)450; Cytochrome P450 4; Cytochrome P450-P3
Gene ID	1544.0
SwissProt ID	P05177.The antiserum was produced against synthesized peptide derived from human Cytochrome P450 1A2. AA range:331-380

Application

Dilution Ratio	IHC 1:100-1:300 ELISA: 1:10000
Molecular Weight	

Background

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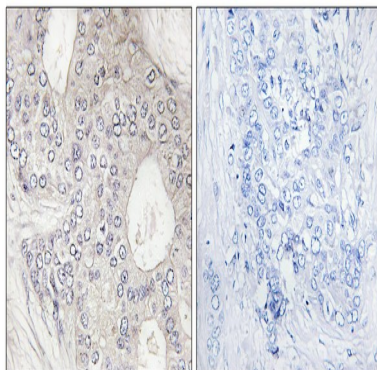


This gene encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. The protein encoded by this gene localizes to the endoplasmic reticulum 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 sequences flanked by direct repeats in the 3' untranslated region. [provided by RefSeq, Jul 2008], catalytic activity: $\text{RH} + \text{reduced flavoprotein} + \text{O}_2 = \text{ROH} + \text{oxidized flavoprotein} + \text{H}_2\text{O}$, cofactor: Heme group, function: Cytochromes P450 are a group of heme-thiolate monooxygenases. In liver microsomes, this enzyme is involved in an NADPH-dependent electron transport pathway. It oxidizes a variety of structurally unrelated compounds, including steroids, fatty acids, and xenobiotics. Most active in catalyzing 2-hydroxylation. Caffeine is metabolized primarily by cytochrome CYP1A2 in the liver through an initial N3-demethylation. Also acts in the metabolism of aflatoxin B1 and acetaminophen. Participates in the bioactivation of carcinogenic aromatic and heterocyclic amines. Catalyzes the N-hydroxylation of heterocyclic amines and the O-deethylation of phenacetin, induction: By nicotine, omeprazole, phenobarbital, primidone and rifampicin, online information: CYP1A2 alleles, polymorphism: The CYP1A2*1F allele which is quite common (40 to 50%) is due to a substitution of a base in the non-coding region of the CYP1A2 gene and has the effect of decreasing the enzyme inducibility. Individuals who are homozygous for the CYP1A2*1F allele are 'slow' caffeine metabolizers. Thus for these individual increased intake of caffeine seems to be associated with a concomitant increase in the risk of non-fatal myocardial infarction (MI), similarity: Belongs to the cytochrome P450 family, tissue specificity: Liver,

Research Area

Caffeine metabolism; Tryptophan metabolism; Linoleic acid metabolism; Retinol metabolism; Metabolism of xenobiotics by cytochrome P450; Drug metabolism;

Image Data



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma tissue, using Cytochrome P450 1A2 Antibody. The picture on the right is blocked with the synthesized peptide.

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Note

For research use only.