

Product name:	CYP1A2 Rabbit Polyclonal Antibody
Cat number:	ABN09630
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human Cytochrome P450 1A2. AA range:331-380
Reactivity:	Human,Mouse,Rat
Applications:	IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:5000-1:20000
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

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:RH + reduced flavoprotein + O(2) = ROH + oxidized flavoprotein + H(2)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 infraction (MI).,similarity:Belongs to the cytochrome P450 family.,tissue specificity:Liver.,