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Cytochrome P450 1A1/2 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51141

Specification

Cytochrome P450 1A1/2 Antibody - Product Information

Application	**WB, IP, ICC, IHC-P, E**
Primary Accession	P04798
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**56 KDa**

Cytochrome P450 1A1/2 Antibody - Additional Information

Gene ID 1543

Other Names
Cytochrome P450 1A1, CYPIA1, Cytochrome P450 form 6, Cytochrome P450-C, Cytochrome P450-P1, CYP1A1

Dilution
WB~~1:1000
IP~~N/A
ICC~~N/A
IHC-P~~N/A
E~~N/A

Format
0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

Storage
Store at -20 °C.Stable for 12 months from date of receipt

Cytochrome P450 1A1/2 Antibody - Protein Information

Name CYP1A1 {ECO:0000303|PubMed:10681376, ECO:0000312|HGNC:HGNC:2595}

Function
A cytochrome P450 monooxygenase involved in the metabolism of various endogenous substrates, including fatty acids, steroid hormones and vitamins (PubMed:10681376, PubMed:11555828, PubMed:12865317, PubMed:14559847, PubMed:15041462, PubMed:15805301, PubMed:18577768, PubMed:<a

href="http://www.uniprot.org/citations/19965576" target="_blank">19965576, PubMed:20972997). 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:10681376, PubMed:11555828, PubMed:12865317, PubMed:14559847, PubMed:15041462, PubMed:15805301, PubMed:18577768, PubMed:19965576, PubMed:20972997). 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, as well as D-ring hydroxylated E1 and E2 at the C15-alpha and C16- alpha positions (PubMed:11555828, PubMed:12865317, PubMed:14559847, PubMed:15805301). Displays different regioselectivities for polyunsaturated fatty acids (PUFA) hydroxylation (PubMed:15041462, PubMed:18577768). Catalyzes the epoxidation of double bonds of certain PUFA (PubMed:15041462, PubMed:19965576, PubMed:20972997). Converts arachidonic acid toward epoxyeicosatrienoic acid (EET) regioisomers, 8,9-, 11,12-, and 14,15-EET, that function as lipid mediators in the vascular system (PubMed:20972997). Displays an absolute stereoselectivity in the epoxidation of eicosapentaenoic acid (EPA) producing the 17(R),18(S) enantiomer (PubMed:15041462). May play an important role in all-trans retinoic acid biosynthesis in extrahepatic tissues. 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). May also participate in eicosanoids metabolism by converting hydroperoxide species into oxo metabolites (lipoxygenase-like reaction, NADPH-independent) (PubMed:21068195).

Cellular Location
Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:P00185}; Peripheral membrane protein {ECO:0000250|UniProtKB:P00185}. Mitochondrion inner membrane {ECO:0000250|UniProtKB:P00185}; Peripheral membrane protein {ECO:0000250|UniProtKB:P00185}. Microsome membrane {ECO:0000250|UniProtKB:P00185}; Peripheral membrane protein {ECO:0000250|UniProtKB:P00185}. Cytoplasm {ECO:0000250|UniProtKB:P00185}

Tissue Location
Lung, lymphocytes and placenta.

Cytochrome P450 1A1/2 Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Cytochrome P450 1A1/2 Antibody - Images

Cytochrome P450 1A1/2 Antibody - Background

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.

Cytochrome P450 1A1/2 Antibody - References

Jaiswal A.K.,et al.Nucleic Acids Res. 13:4503-4520(1985).
Jaiswal A.K.,et al.Science 228:80-83(1985).
Kawajiri K.,et al.Eur. J. Biochem. 159:219-225(1986).
Corchero J.,et al.Pharmacogenetics 11:1-6(2001).
Graebsch C.,et al.Submitted (FEB-2006) to the EMBL/GenBank/DDBJ databases.