

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, CYP1A1, Cytochrome P450 form 6, Cytochrome P450-C, Cytochrome P450-P1, CYP1A1

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](http://www.uniprot.org/citations/10681376), PubMed:[11555828](http://www.uniprot.org/citations/11555828), PubMed:[12865317](http://www.uniprot.org/citations/12865317), PubMed:[14559847](http://www.uniprot.org/citations/14559847), PubMed:[15041462](http://www.uniprot.org/citations/15041462), PubMed:[15805301](http://www.uniprot.org/citations/15805301), PubMed:[18577768](http://www.uniprot.org/citations/18577768), PubMed:[19965576](http://www.uniprot.org/citations/19965576), PubMed:[20972997](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/10681376), PubMed:[11555828](http://www.uniprot.org/citations/11555828), PubMed:[10681376](http://www.uniprot.org/citations/10681376), PubMed:[11555828](http://www.uniprot.org/citations/11555828)).

href="http://www.uniprot.org/citations/12865317" target="_blank">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 hydroxystrogens 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 Cytometry](#)
- [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).

Graebisch C.,et al.Submitted (FEB-2006) to the EMBL/GenBank/DDBJ databases.