

**CYP1B1 Antibody**  
Rabbit mAb  
Catalog # AP91786

## Specification

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### CYP1B1 Antibody - Product Information

Application	WB, IHC, FC
Primary Accession	<a href="#">Q16678</a>
Reactivity	Rat
Clonality	Monoclonal
<b>Other Names</b>	
CP1B; Cyp1b1; CYPIB1; Cytochrome P450 1B1; GLC3A; P4501B1;	
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	60846 Da

### CYP1B1 Antibody - Additional Information

Dilution	WB~~1:1000 IHC~~1:100~500 FC~~1:10~50
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human CYP1B1
Description	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.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

### CYP1B1 Antibody - Protein Information

**Name** CYP1B1 {ECO:0000303|PubMed:8910454, ECO:0000312|HGNC:HGNC:2597}

#### Function

A cytochrome P450 monooxygenase involved in the metabolism of various endogenous substrates, including fatty acids, steroid hormones and vitamins (PubMed:<a href="http://www.uniprot.org/citations/10681376" target="\_blank">10681376</a>, PubMed:<a href="http://www.uniprot.org/citations/11555828" target="\_blank">11555828</a>, PubMed:<a href="http://www.uniprot.org/citations/12865317" target="\_blank">12865317</a>, PubMed:<a

href="http://www.uniprot.org/citations/15258110" target="\_blank">15258110</a>, PubMed:<a href="http://www.uniprot.org/citations/20972997" target="\_blank">20972997</a>). 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:<a href="http://www.uniprot.org/citations/10681376" target="\_blank">10681376</a>, PubMed:<a href="http://www.uniprot.org/citations/11555828" target="\_blank">11555828</a>, PubMed:<a href="http://www.uniprot.org/citations/12865317" target="\_blank">12865317</a>, PubMed:<a href="http://www.uniprot.org/citations/15258110" target="\_blank">15258110</a>, PubMed:<a href="http://www.uniprot.org/citations/20972997" target="\_blank">20972997</a>). Exhibits catalytic activity for the formation of hydroxysterogens from estrone (E1) and 17beta-estradiol (E2), namely 2- and 4-hydroxy E1 and E2. Displays a predominant hydroxylase activity toward E2 at the C-4 position (PubMed:<a href="http://www.uniprot.org/citations/11555828" target="\_blank">11555828</a>, PubMed:<a href="http://www.uniprot.org/citations/12865317" target="\_blank">12865317</a>). Metabolizes testosterone and progesterone to B or D ring hydroxylated metabolites (PubMed:<a href="http://www.uniprot.org/citations/10426814" target="\_blank">10426814</a>). May act as a major enzyme for 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:<a href="http://www.uniprot.org/citations/10681376" target="\_blank">10681376</a>, PubMed:<a href="http://www.uniprot.org/citations/15258110" target="\_blank">15258110</a>). Catalyzes the epoxidation of double bonds of certain PUFA. Converts arachidonic acid toward epoxyeicosatrienoic acid (EpETrE) regioisomers, 8,9-, 11,12-, and 14,15- EpETrE, that function as lipid mediators in the vascular system (PubMed:<a href="http://www.uniprot.org/citations/20972997" target="\_blank">20972997</a>). Additionally, displays dehydratase activity toward oxygenated eicosanoids hydroperoxyeicosatetraenoates (HpETEs). This activity is independent of cytochrome P450 reductase, NADPH, and O<sub>2</sub> (PubMed:<a href="http://www.uniprot.org/citations/21068195" target="\_blank">21068195</a>). Also involved in the oxidative metabolism of xenobiotics, particularly converting polycyclic aromatic hydrocarbons and heterocyclic aryl amines procarcinogens to DNA-damaging products (PubMed:<a href="http://www.uniprot.org/citations/10426814" target="\_blank">10426814</a>). Plays an important role in retinal vascular development. Under hyperoxic O<sub>2</sub> conditions, promotes retinal angiogenesis and capillary morphogenesis, likely by metabolizing the oxygenated products generated during the oxidative stress. Also, contributes to oxidative homeostasis and ultrastructural organization and function of trabecular meshwork tissue through modulation of POSTN expression (By similarity).

#### Cellular Location

Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q64429}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q64429}. Microsome membrane {ECO:0000250|UniProtKB:Q64429}; Peripheral membrane protein {ECO:0000250|UniProtKB:Q64429}. Mitochondrion {ECO:0000250|UniProtKB:Q64429}. Note=Located primarily in endoplasmic reticulum. Upon treatment with 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD), CYP1B1 is also targeted to mitochondria {ECO:0000250|UniProtKB:Q64429}

#### Tissue Location

Expressed in heart, brain, lung, skeletal muscle, kidney, spleen, thymus, prostate, testis, ovary, small intestine, colon, and peripheral blood leukocytes (PubMed:8175734). Expressed in retinal endothelial cells and umbilical vein endothelial cells (at protein level) (PubMed:19005183).

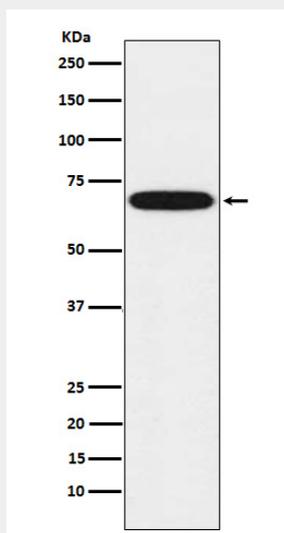
#### CYP1B1 Antibody - Protocols

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](#)

### CYP1B1 Antibody - Images



Western blot analysis of CYP1B1 expression in Human fetal kidney lysate.