

Product Name: CYP1B1 (17Y5) Rabbit Monoclonal Antibody
Catalog #: AMRe09631



Summary

Production Name	CYP1B1 (17Y5) Rabbit Monoclonal Antibody
Description	Rabbit Monoclonal Antibody
Host	Rabbit
Application	WB
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Monoclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Supplied in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% New type preservative N and 0.05% BSA.
Purification	Affinity purification

Immunogen

Gene Name	CYP1B1 {ECO:0000303 PubMed:8910454, ECO:0000312 HGNC:HGNC:2597}
Alternative Names	CP1B; Cyp1b1; CYP1B1; Cytochrome P450 1B1; GLC3A; P4501B1;
Gene ID	1545.0
SwissProt ID	Q16678.Recombinant protein of human CYP1B1

Application

Dilution Ratio	WB: 1:1000-1:5000
Molecular Weight	61kDa

Background

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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. A cytochrome P450 monooxygenase involved in the metabolism of various endogenous substrates, including fatty acids, steroid hormones and vitamins (PubMed: [20972997](http://www.uniprot.org/citations/20972997), PubMed: [11555828](http://www.uniprot.org/citations/11555828), PubMed: [12865317](http://www.uniprot.org/citations/12865317), PubMed: [10681376](http://www.uniprot.org/citations/10681376), PubMed: [15258110](http://www.uniprot.org/citations/15258110)). 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: [20972997](http://www.uniprot.org/citations/20972997), PubMed: [11555828](http://www.uniprot.org/citations/11555828), PubMed: [12865317](http://www.uniprot.org/citations/12865317), PubMed: [10681376](http://www.uniprot.org/citations/10681376), PubMed: [15258110](http://www.uniprot.org/citations/15258110)). Exhibits catalytic activity for the formation of hydroxyestrogens 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: [11555828](http://www.uniprot.org/citations/11555828), PubMed: [12865317](http://www.uniprot.org/citations/12865317)). Metabolizes testosterone and progesterone to B or D ring hydroxylated metabolites (PubMed: [10426814](http://www.uniprot.org/citations/10426814)). 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: [10681376](http://www.uniprot.org/citations/10681376), PubMed: [15258110](http://www.uniprot.org/citations/15258110)). 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: [20972997](http://www.uniprot.org/citations/20972997)). Additionally, displays dehydratase activity toward oxygenated eicosanoids hydroperoxyeicosatetraenoates (HpETEs). This activity is independent of cytochrome P450 reductase, NADPH, and O₂ (PubMed: [21068195](http://www.uniprot.org/citations/21068195)). Also involved in the oxidative metabolism of xenobiotics, particularly converting polycyclic aromatic hydrocarbons and heterocyclic aryl amines procarcinogens to DNA-damaging products (PubMed: [10426814](http://www.uniprot.org/citations/10426814)). Plays an important role in retinal vascular development. Under hyperoxic O₂ conditions, promotes retinal angiogenesis and capillary morphogenesis, likely by metabolizing the oxygenated products generated during the oxidative stress. Also, contributes to oxidative homeostasis

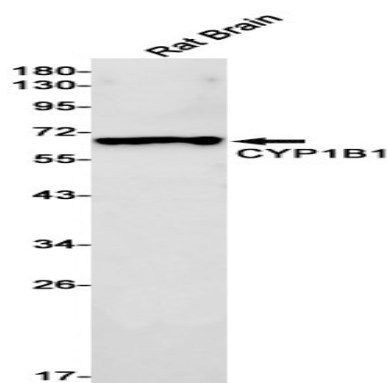
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and ultrastructural organization and function of trabecular meshwork tissue through modulation of POSTN expression (By similarity).

Research Area

Image Data



Western blot detection of CYP1B1 in Rat Brain lysates using CYP1B1 antibody(1:1000 diluted).

Note

For research use only.