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Anti-CYP1B1 Rabbit Monoclonal Antibody

Catalog # ABO15325

Product Information

Application	WB, IHC, FC
Primary Accession	Q16678
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-CYP1B1 Rabbit Monoclonal Antibody . Tested in WB, IHC, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

Additional Information

Gene ID	1545
Other Names	Cytochrome P450 1B1, 1.14.14.1, CYPIB1, Hydroperoxy icosatetraenoate dehydratase, 4.2.1.152, CYP1B1 {ECO:0000303|PubMed:8910454, ECO:0000312|HGNC:HGNC:2597}
Calculated MW	60846
Application Details	WB 1:500-1:2000 IHC 1:50-1:200 FC 1:100
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: 19C01
Immunogen	A synthesized peptide derived from human CYP1B1
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

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:10681376, PubMed:11555828, PubMed:12865317, PubMed:15258110, 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:15258110, PubMed:20972997). 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, PubMed:12865317). Metabolizes testosterone and progesterone to B or D ring hydroxylated metabolites (PubMed: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, PubMed: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). Additionally, displays dehydratase activity toward oxygenated eicosanoids hydroperoxyeicosatetraenoates (HpETEs). This activity is independent of cytochrome P450 reductase, NADPH, and O2 (PubMed: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). 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 and ultrastructural organization and function of trabecular meshwork tissue through modulation of POSTN expression (By similarity).

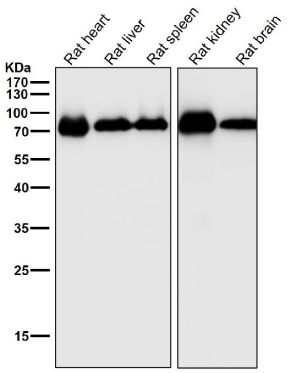
Cellular Location

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}

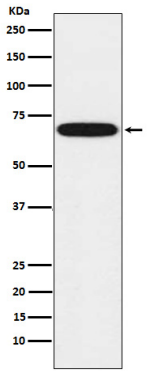
Tissue Location

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).

Images



All lanes use the Antibody at 1:2K dilution for 1 hour at room temperature.



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

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.