Active Cytochrome P450 1B1 (CYP1B1)

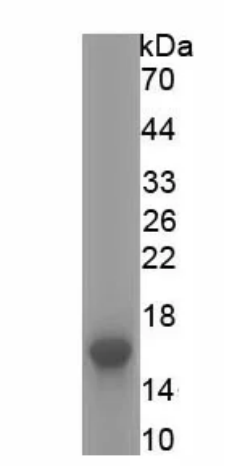
Catalog#:PEH12909

概述（Summary）

别称（Alternative Names）	CP1B; GLC3A; Cytochrome P450,Family 1,Subfamily B,Polypeptide 1; Glaucoma 3,Primary Infantile
纯度（Purity）	Greater than 97% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Asp374-Phe516】
Accession #	Q16678
表达宿主（Host）	E.coli
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	17.6 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in ddH_2O to a concentration of 0.1-0.5 mg/mL. Do not vortex.
背景介绍（References）	A cytochrome P450 monooxygenase involved in the metabolism of various endogenous substrates, including fatty acids, steroid hormones and vitamins. 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). 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. Metabolizes testosterone and progesterone to B or D ring hydroxylated

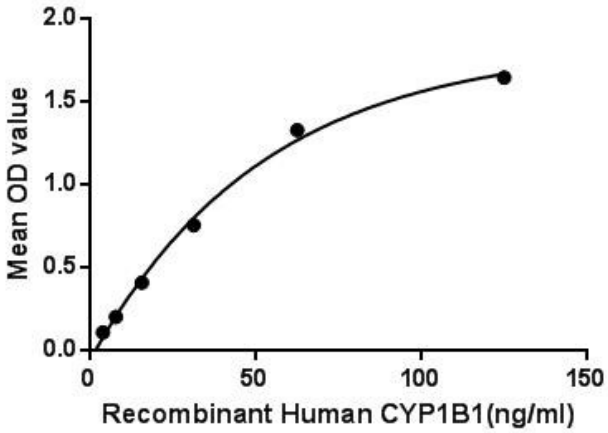
metabolites. May act as a major enzyme for all-trans retinoic acid biosynthesis in extrahepatic tissues. Catalyzes two successive oxidative transformation of all-trans retinol to all-trans retinal and then to the active form all-trans retinoic acid. Catalyzes the epoxidation of double bonds of certain 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. Additionally, displays dehydratase activity toward oxygenated eicosanoids hydroperoxyeicosatetraenoates (HpETEs). This activity is independent of cytochrome P450 reductase, NADPH, and O2. Also involved in the oxidative metabolism of xenobiotics, particularly converting polycyclic aromatic hydrocarbons and heterocyclic aryl amines procarcinogens to DNA-damaging products. 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.

电泳图（SDS-PAGE image）



Greater than 97% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）



Cytochrome P450 family 1 subfamily B member 1 (CYP1B1) is an enzyme, Which belongs to the cytochrome P450 superfamily. CYP1B1 can catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids, and other lipids. Besides, Heat Shock Protein family B (small) member 2 (HSPb2) has been identified as an interactor of CYP1B1, thus a binding ELISA assay was conducted to detect the interaction of recombinant human CYP1B1 and recombinant human HSPb2, CYP1B1 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to HSPb2-coated microtiter wells and incubated for 2h at 37℃. Wells were washed with PBST and incubated for 1h with anti-CYP1B1 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50μL stop solution to the wells and read at 450nm immediately. The binding activity of CYP1B1 and HSPb2 was shown in Figure 1, and this effect was in a dose dependent manner. Figure. The binding activity of CYP1B1 with HSPb2.

注意事项（Note）

For Research Use Only , Not for Diagnostic Use.