

Active Recombinant Human CYP1B1 Protein

Cat. No. CYP1B1-70H Lot. No. (See product label)

SPECIFICATION

Product Overview Recombinant human CYP1B1 (Val-432) protein and CYP-reductase without tag were coexpressed in E. coli.

Species Human

Source E.coli

Description This gene encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. The enzyme encoded by this gene localizes to the endoplasmic reticulum and metabolizes procarcinogens such as polycyclic aromatic hydrocarbons and 17beta-estradiol. Mutations in this gene have been associated with primary congenital glaucoma; therefore it is thought that the enzyme also metabolizes a signaling molecule involved in eye development, possibly a steroid.

Bio-activity Cytochrome c Reductase Activity: 227 nmol/min/mg protein
P450 Activity Data(Unless otherwise stated, all assays are carried out at 37 centigrade in 50 mM potassium phosphate buffer (pH 7.4) containing 5 mM magnesium chloride and an NADPH generating system [5 mM glucose 6-phosphate, 1 mM NADP+ , 1 U/ml glucose 6-phosphate dehydrogenase])
Activity: 17β-estradiol 4-hydroxylase
Linear with time up to: 20 min(Determined at 4 μM substrate, using a P450 concentration of 12.5 pmol/ml)

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	<p>Linear with P450 up to: 80 pmol/ml(Determined at 4 μM substrate, using an incubation time of 5 min)</p> <p>Vmax: 1.6 pmol/min/pmol CYP</p> <p>Km: 0.66 μM</p>
Usage	For laboratory (research) purposes only
Storage	Store at -80 centigrade. Avoid frequent temperature changes. Thaw on ice.
Concentration	<p>P450 Concentration: 5.8 nmol/ml</p> <p>Protein Concentration: 8.8 mg/ml</p> <p>Specific P450 Content: 659 pmol/mg protein</p>
Storage Buffer	50 mM Tris-acetate (pH 7.6), 250 mM sucrose, 0.25 mM EDTA
GENE INFORMATION	
Gene Name	CYP1B1 cytochrome P450 family 1 subfamily B member 1 [Homo sapiens (human)]
Official Symbol	CYP1B1
Synonyms	CYP1B1; cytochrome P450 family 1 subfamily B member 1; CP1B; ASGD6; GLC3A; CYP1B1; P4501B1; cytochrome P450 1B1; aryl hydrocarbon hydroxylase; cytochrome P450, family 1, subfamily B, polypeptide 1; cytochrome P450, subfamily I (dioxin-inducible), polypeptide 1 (glaucoma 3, primary infantile); dioxin-inducible cytochrome p450; flavoprotein-linked monooxygenase; hydroperoxy icosatetraenoate dehydratase; microsomal monooxygenase; xenobiotic monooxygenase
Gene ID	1545
mRNA Refseq	NM_000104

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Protein Refseq	NP_000095
MIM	601771
UniProt ID	Q16678

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