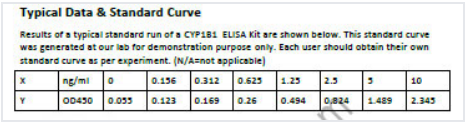
Cytochrome P450, Family 1, Subfamily B, Polypeptide 1 (CYP1B1) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Cytochrome P450, family 1, subfamily B, polypeptide 1 (CYP1B1), ELISA Kit
Full Product Name	Human Cytochrome P450, family 1, subfamily B, polypeptide 1 ELISA Kit
Product Gene Name	CYP1B1 elisa kit
Product Synonym Names	CYP1B1/Cytochrome P450 1B1/CP1B/CYPIB1/GLC3A/P4501B1
Species Reactivity	Human
Assay Type	Sandwich ELISA, Double Antibody
Samples	Serum, Plasma, Cell Culture Supernatant, cell or tissue lysate, Other liquid samples
Detection Range	0.156-10ng/ml
Sensitivity	0.094ng/ml
Specificity	This assay has high sensitivity and excellent specificity for detection of CYP1B1 . No significant cross-reactivity or interference between CYP1B1 and analogues was observed.
Preparation and Storage	Store entire kit at 2-8C for short-term. For longer-term, please store the microplate & standard at -20C, while the remaining reagents can be stored at 2-8C
Inter-assay Precision	Inter-assay Precision (Precision between assays): 3 samples with low, middle and high level CYP1B1 were tested on 3 different plates, 8 replicates in each plate. CV (%) = SD/meanX100. Inter-Assay: CV<10%
Intra-assay Precision	Intra-assay Precision (Precision within an assay): 3 samples with low, middle and high level CYP1B1 were tested 20 times on one plate, respectively. Intra-Assay: CV<8%
Molecular Weight	60,846 Da
OMIM	137750
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for CYP1B1 elisa kit	Principle of the Assay: This kit was based on sandwich enzyme-linked immune-sorbent assay technology. Anti-CYP1B1 antibody was pre-coated onto 96-well plates. And the biotin conjugated anti- CYP1B1 antibody was used as detection antibodies. The standards, test samples and biotin conjugated detection antibody were added to the wells subsequently, and wash with wash buffer. HRP-Streptavidin was added and unbound conjugates were washed away with wash buffer. TMB substrates were used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the CYP1B1 amount of sample captured in plate. Read the O.D. absorbance at 450nm in a microplate reader, and then the concentration of CYP1B1 can be calculated.
Other Notes	Small volumes of CYP1B1 elisa kit vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CYP1B1 purchase	MBS761221 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Cytochrome P450, family 1, subfamily B, polypeptide 1 (CYP1B1) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing CYP1B1. The ELISA analytical biochemical technique of the MBS761221 kit is based on CYP1B1 antibody-CYP1B1 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CYP1B1 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CYP1B1. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).



Typical Testing Data/Standard Curve (for reference only) of CYP1B1 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CYP1B1. It may not necessarily be applicable to this product.

NCBI GI #	54696820
NCBI GeneID	1545
NCBI Accession #	AAV38782.1
UniProt Secondary Accession #	Q5TZW8; Q93089; Q9H316
UniProt Related Accession #	Q16678
NCBI Official Full Name	cytochrome P450, family 1, subfamily B, polypeptide 1
NCBI Official Synonym Full Names	cytochrome P450 family 1 subfamily B member 1
NCBI Official Symbol	CYP1B1
NCBI Official Synonym Symbols	CP1B; GLC3A; CYPIB1; P4501B1
UniProt Protein Name	Cytochrome P450 1B1
UniProt Synonym Protein Names	CYPIB1
Protein Family	Cytochrome
UniProt Gene Name	CYP1B1
UniProt Entry Name	CP1B1_HUMAN
NCBI Protein Information	cytochrome P450 1B1
NCBI Summary for CYP1B1	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. [provided by RefSeq, Jul 2008]

UniProt Comments for CYP1B1	CYP1B1: 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. Defects in CYP1B1 are the cause of primary congenital glaucoma type 3A (GLC3A). GLC3A is an autosomal recessive form of primary congenital glaucoma (PCG). PCG is characterized by marked increase of intraocular pressure at birth or early childhood, large ocular globes (buphthalmos) and corneal edema. It results from developmental defects of the trabecular meshwork and anterior chamber angle of the eye that prevent adequate drainage of aqueous humor. Defects in CYP1B1 are a cause of primary open angle glaucoma (POAG). POAG is a complex and genetically heterogeneous ocular disorder characterized by a specific pattern of optic nerve and visual field defects. The angle of the anterior chamber of the eye is open, and usually the intraocular pressure is increased. The disease is asymptomatic until the late stages, by which time significant and irreversible optic nerve damage has already taken place. In some cases, POAG shows digenic inheritance involving mutations in CYP1B1 and MYOC genes. Defects in CYP1B1 are a cause of Peters anomaly (PAN). Peters anomaly is a congenital defect of the anterior chamber of the eye. Belongs to the cytochrome P450 family. Protein type: Amino Acid Metabolism - tryptophan; Xenobiotic Metabolism - metabolism by cytochrome P450; EC 1.14.14.1; Oxidoreductase Chromosomal Location of Human Ortholog: 2p22.2 Cellular Component: endoplasmic reticulum membrane; intracellular membrane-bound organelle; mitochondrion Molecular Function: heme binding; iron ion binding; monooxygenase activity; oxidoreductase activity, acting on paired donors, with incorporation or reduction of molecular oxygen, reduced flavin or flavoprotein as one donor, and incorporation of one atom of oxygen; oxygen binding Biological Process: angiogenesis; arachidonic acid metabolic process; aromatic compound metabolic process; blood vessel morphogenesis; cell adhesion; collagen fibril organization; endothelial cell migration; epoxygenase P450 pathway; estrogen metabolic process; induction of apoptosis by oxidative stress; inhibition of NF-kappaB transcription factor; membrane lipid catabolic process; negative regulation of cell adhesion mediated by integrin; negative regulation of cell migration; negative regulation of cell proliferation; nitric oxide biosynthetic process; positive regulation of angiogenesis; positive regulation of apoptosis; positive regulation of JAK-STAT cascade; response to toxin; retinal metabolic process; retinol metabolic process; steroid metabolic process; sterol metabolic process; toxin metabolic process; visual perception; xenobiotic metabolic process Disease: Glaucoma 3, Primary Congenital, A; Glaucoma 3, Primary Infantile, B; Peters Anomaly
Research Articles on CYP1B1	**1.** This study is the first to report the variety of mutations in the CYP1B1 gene in a group of Portuguese children with primary congenital glaucoma and to describe 2 new mutations.
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