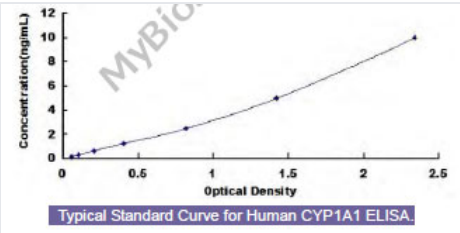
# Cytochrome P450 1a1 (CYP1A1) ELISA Kit for Human

## PRODUCT OVERVIEW

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| **Product Name** | Cytochrome P450 1A1 (CYP1A1), ELISA Kit |
| **Full Product Name** | Human Cytochrome P450 1A1 (CYP1A1) ELISA Kit |
| **Product Gene Name** | CYP1A1 elisa kit |
| **Product Synonym Names** | CYP1; AHH; AHRR; CP11; CYP1; P1-450; P450-C; P450DX; Cytochrome P450,Subfamily I(Aromatic Compound-Inducible),Polypeptide 1 |
| **Species Reactivity** | Human |
| **Assay Type** | Sandwich |
| **Samples** | Serum, plasma, tissue homogenates, cell lysates and other biological fluids. |
| **Detection Range** | 0.156-10ng/mL |
| **Sensitivity** | 0.056ng/mL |
| **Specificity** | This assay has high sensitivity and excellent specificity for detection of CYP1A1. No significant cross-reactivity or interference between CYP1A1 and analogues was observed. |
| **Preparation and Storage** | For unopened kit, all reagents should be kept according to the labels on vials. The TMB Substrate, Wash Buffer, Stop Solution should be stored at 4 degree C. All others should be stored at -20 degree C. |
| **Inter-assay Precision** | Inter-assay Precision (Precision between assays): 3 samples with low, middle and high level CYP1A1 were tested on 3 different plates, 8 replicates in each plate. CV(%) = SD/meanX100. Inter-Assay: CV<12% |
| **Intra-assay Precision** | Intra-assay Precision (Precision within an assay): 3 samples with low, middle and high level CYP1A1 were tested 20 times on one plate, respectively. Intra-Assay: CV<10% |
| **Molecular Weight** | 18,441 Da |
| **OMIM** | X02612 Genomic DNA |
| **3D Structure** | ModBase 3D Structure for P04798 |
| **ISO Certification** | Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory. |
| **Related Product Information for CYP1A1 elisa kit** | Intended Uses: The kit is a sandwich enzyme immunoassay for in vitro quantitative measurement of CYP1A1 in human serum, plasma, tissue homogenates, cell lysates and other biological fluids.<br><br>Principle of the Assay: The microtiter plate provided in this kit has been pre-coated with an antibody specific to CYP1A1. Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated antibody preparation specific to CYP1A1. Next, Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. After TMB substrate solution is added, only those wells that contain CYP1A1, biotin-conjugated antibody and enzyme-conjugated Avidin will exhibit a change in color. The enzyme-substrate reaction is terminated by the addition of sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450nm +/- 10nm. The concentration of CYP1A1 in the samples is then determined by comparing the O.D. of the samples to the standard curve. |
| **Other Notes** | Small volumes of CYP1A1 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. |

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| **Searchable Terms for CYP1A1 purchase** | MBS453896 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Cytochrome P450 1A1 (CYP1A1) 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 CYP1A1. The ELISA analytical biochemical technique of the MBS453896 kit is based on CYP1A1 antibody-CYP1A1 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CYP1A1 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CYP1A1. 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 CYP1A1 elisa kit**

## ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CYP1A1. It may not necessarily be applicable to this product.

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| **NCBI GI #** | 4503199 |
| **NCBI GeneID** | 1543 |
| **NCBI Accession #** | NP_000490.1 |
| **UniProt Primary Accession #** | P04798 |
| **UniProt Secondary Accession #** | Q53G18; A4F3V9; A4F3W0 |
| **UniProt Related Accession #** | P04798 |
| **GenBank Nucleotide #** | NM_000499.4 |
| **NCBI Official Full Name** | cytochrome P450 1A1 isoform 1 |
| **NCBI Official Synonym Full Names** | cytochrome P450 family 1 subfamily A member 1 |
| **NCBI Official Symbol** | CYP1A1 |
| **NCBI Official Synonym Symbols** | AHH; AHRR; CP11; CYP1; CYPIA1; P1-450; P450-C; P450DX |
| **UniProt Protein Name** | Cytochrome P450 1A1 |
| **UniProt Synonym Protein Names** | CYPIA1; Cytochrome P450 form 6; Cytochrome P450-C; Cytochrome P450-P1 |
| **Protein Family** | Cytochrome |
| **UniProt Gene Name** | CYP1A1 |
| **NCBI Protein Information** | cytochrome P450 1A1 |
| **NCBI Summary for CYP1A1** | This gene, CYP1A1, 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. This protein localizes to the endoplasmic reticulum and its expression is induced by some polycyclic aromatic hydrocarbons (PAHs), some of which are found in cigarette smoke. The enzyme's endogenous substrate is unknown; however, it is able to metabolize some PAHs to carcinogenic intermediates. The gene has been associated with lung cancer risk. A related family member, CYP1A2, is located approximately 25 kb away from CYP1A1 on chromosome 15. Alternative splicing results in multiple transcript variants encoding distinct isoforms. [provided by RefSeq, Jan 2016] |
| **UniProt Comments for CYP1A1** | 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. |

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| **Research Articles on CYP1A1** | **1.** CYP1A1 rs1048943 and rs4646903 polymorphisms contribute to risk of laryngeal cancer. |
| **Precautions** | All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines. |
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