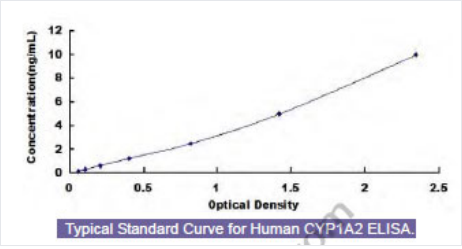
Cytochrome P450 1a2 (CYP1A2) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	Cytochrome P450 1A2 (CYP1A2), ELISA Kit
Full Product Name	Human Cytochrome P450 1A2 (CYP1A2) ELISA Kit
Product Gene Name	CYP1A2 elisa kit
Product Synonym Names	CP12; P3-450; P450(PA); Cytochrome P450,Family 1,Subfamily A,Polypeptide 2
Species Reactivity	Human
Assay Type	Sandwich
Samples	Tissue homogenates, cell lysates, cell culture supernates and other biological fluids.
Detection Range	0.156-10ng/mL
Sensitivity	0.051ng/mL
Specificity	This assay has high sensitivity and excellent specificity for detection of CYP1A2. No significant cross-reactivity or interference between CYP1A2 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 CYP1A2 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 CYP1A2 were tested 20 times on one plate, respectively. Intra-Assay: CV<10%
Molecular Weight	58,407 Da
OMIM	Z00036 mRNA
3D Structure	ModBase 3D Structure for P05177
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for CYP1A2 elisa kit	Intended Uses: The kit is a sandwich enzyme immunoassay for in vitro quantitative measurement of CYP1A2 in human tissue homogenates, cell lysates, cell culture supernates and other biological fluids. Principle of the Assay: The microtiter plate provided in this kit has been pre-coated with an antibody specific to CYP1A2. Standards or samples are then added to the appropriate microtiter plate wells with a biotin-conjugated antibody preparation specific to CYP1A2. 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 CYP1A2, 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 CYP1A2 in the samples is then determined by comparing the O.D. of the samples to the standard curve.
Other Notes	Small volumes of CYP1A2 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 CYP1A2 purchase	MBS453739 is a ready-to-use microwell, strip-or-full plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Cytochrome P450 1A2 (CYP1A2) 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 CYP1A2. The ELISA analytical biochemical technique of the MBS453739 kit is based on CYP1A2 antibody-CYP1A2 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CYP1A2 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CYP1A2. 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 CYP1A2 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CYP1A2. It may not necessarily be applicable to this product.

NCBI GI #	73915100
NCBI GeneID	1544
NCBI Accession #	NP_000752.2
UniProt Primary Accession #	P05177
UniProt Secondary Accession #	Q16754; Q6NWU5; Q9BXX7; Q9UK49
UniProt Related Accession #	P05177
GenBank Nucleotide #	NM_000761.4
NCBI Official Full Name	cytochrome P450 1A2
NCBI Official Synonym Full Names	cytochrome P450 family 1 subfamily A member 2
NCBI Official Symbol	CYP1A2
NCBI Official Synonym Symbols	CP12; P3-450; P450(PA)
UniProt Protein Name	Cytochrome P450 1A2
UniProt Synonym Protein Names	CYPIA2; Cholesterol 25-hydroxylase
Protein Family	Cytochrome
UniProt Gene Name	CYP1A2
NCBI Protein Information	cytochrome P450 1A2
NCBI Summary for CYP1A2	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 protein encoded by this gene 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. Other xenobiotic substrates for this enzyme include caffeine, aflatoxin B1, and acetaminophen. The transcript from this gene contains four Alu sequences flanked by direct repeats in the 3' untranslated region. [provided by RefSeq, Jul 2008]

UniProt Comments for CYP1A2	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. Most active in catalyzing 2-hydroxylation. Caffeine is metabolized primarily by cytochrome CYP1A2 in the liver through an initial N3-demethylation. Also acts in the metabolism of aflatoxin B1 and acetaminophen. Participates in the bioactivation of carcinogenic aromatic and heterocyclic amines. Catalizes the N-hydroxylation of heterocyclic amines and the O-deethylation of phenacetin.
Research Articles on CYP1A2	**1.** Resulted in transient CYP1A1 and CYP1A2 mRNA accumulations.
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