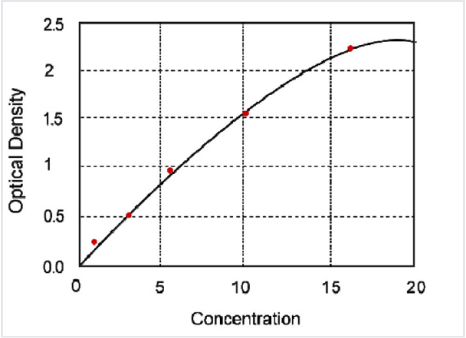
Cytochrome P450 3a4, CYP3A4 (CYP3A4) ELISA Kit for Human

PRODUCT OVERVIEW

Product Name	cytochrome P450 3A4, CYP3A4, ELISA Kit
Full Product Name	Human cytochrome P450 3A4, CYP3A4 ELISA Kit
Product Gene Name	CYP3A4 elisa kit
Species Reactivity	Human
Assay Type	Quantitative Sandwich
Samples	Serum, plasma, cell culture supernates, Ascites, tissue homogenates or other biological fluids
Detection Range	15-3000ng/L
Sensitivity	6.68ng/L
Preparation and Storage	Store at 2 to 8 degree C for 6 months.
Inter-assay Precision	Inter-Assay Precision (Precision between assays) Three samples of known concentration were tested in separate assays to assess inter-assay precision. CV(%) = SD/mean x 100. Inter-Assay: CV<10%
Intra-assay Precision	Intra-Assay Precision (Precision within an assay) Three samples of known concentration were tested on one plate to assess intra-assay precision. Intra-Assay: CV<8%
Molecular Weight	57,343 Da
3D Structure	ModBase 3D Structure for P08684
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for CYP3A4 elisa kit	Principle of the Assay: This kit is an Enzyme-Linked Immunosorbent Assay (ELISA). The plate has been pre-coated with Human CYP3A4 antibody. CYP3A4 present in the sample is added and binds to antibodies coated on the wells. And then biotinylated Human CYP3A4 Antibody is added and binds to CYP3A4 in the sample. Then Streptavidin-HRP is added and binds to the Biotinylated CYP3A4 antibody. After incubation unbound Streptavidin-HRP is washed away during a washing step. Substrate solution is then added and color develops in proportion to the amount of Human CYP3A4. The reaction is terminated by addition of acidic stop solution and absorbance is measured at 450 nm. Intended Uses: This sandwich kit is for the accurate quantitative detection of Human cytochrome P450 3A4 (also known as CYP3A4) in serum, plasma, cell culture supernates, Ascites, tissue homogenates or other biological fluids.
Other Notes	Small volumes of CYP3A4 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 CYP3A4 purchase	MBS166265 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the cytochrome P450 3A4, CYP3A4, 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 CYP3A4. The ELISA analytical biochemical technique of the MBS166265 kit is based on CYP3A4 antibody-CYP3A4 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CYP3A4 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CYP3A4. 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 CYP3A4 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CYP3A4. It may not necessarily be applicable to this product.

NCBI GI #	322302351
NCBI GeneID	1576
NCBI Accession #	NP_001189784.1
UniProt Primary Accession #	P08684
UniProt Secondary Accession #	P05184; Q16757; Q9UK50
UniProt Related Accession #	P08684
GenBank Nucleotide #	NM_001202855.2
NCBI Official Full Name	cytochrome P450 3A4 isoform 2
NCBI Official Synonym Full Names	cytochrome P450 family 3 subfamily A member 4
NCBI Official Symbol	CYP3A4
NCBI Official Synonym Symbols	HLP; CP33; CP34; CYP3A; NF-25; CYP3A3; P450C3; CYPIIIA3; CYPIIIA4; P450PCN1
UniProt Protein Name	Cytochrome P450 3A4
UniProt Synonym Protein Names	1,8-cineole 2-exo-monooxygenase (EC:1.14.14.561 PublicationManual assertion based on experiment iniRef.17"Oxidation of 1,8-cineole, the monoterpene cyclic ether originated from eucalyptus polybractea, by cytochrome P450 3A enzymes in rat and human liver microsomes."Miyazawa M., Shindo M., Shimada T.Drug Metab. Dispos. 29:200-205(2001) [PubMed] [Europe PMC] [Abstract]Cited for: CATALYTIC ACTIVITY, FUNCTION AS 1,8-CINEOLE 2-EXO-MONOOXYGENASE.
Protein Family	Cytochrome
UniProt Gene Name	CYP3A4
UniProt Synonym Gene Names	CYP3A3
NCBI Protein Information	cytochrome P450 3A4
NCBI Summary for CYP3A4	This gene encodes a member of the cytochrome P450 superfamily of enzymes. The cytochrome P450 proteins are monooxygenases that 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 glucocorticoids and some pharmacological agents. This enzyme is involved in the metabolism of approximately half the drugs in use today, including acetaminophen, codeine, cyclosporin A, diazepam and erythromycin. The enzyme also metabolizes some steroids and carcinogens. This gene is part of a cluster of cytochrome P450 genes on chromosome 7q21.1. Previously another CYP3A gene, CYP3A3, was thought to exist; however, it is now thought that this sequence represents a transcript variant of CYP3A4. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Feb 2011]

UniProt Comments for CYP3A4	Cytochromes P450 are a group of heme-thiolate monooxygenases. In liver microsomes, this enzyme is involved in an NADPH-dependent electron transport pathway. It performs a variety of oxidation reactions (e.g. caffeine 8-oxidation, omeprazole sulphoxidation, midazolam 1'-hydroxylation and midazolam 4-hydroxylation) of structurally unrelated compounds, including steroids, fatty acids, and xenobiotics. Acts as a 1,8-cineole 2-exo-monooxygenase. The enzyme also hydroxylates etoposide (PubMed:11159812). Catalyzes 4-beta-hydroxylation of cholesterol. May catalyze 25-hydroxylation of cholesterol in vitro (PubMed:21576599).
Research Articles on CYP3A4	**1.** The metabolites are predominantly catalyzed by CYP3A4 (77% approximately 87%), with a moderate contribution from CYP3A5 (5% approximately 15%) and CYP1A2 (3.7% approximately 7.5%).
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