Cytochrome P450 3a4 (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	Sandwich
Samples	Tissue homogenates, cell lysates, cell culture supernates and other biological fluids.
Detection Range	0.312-20ng/mL
Sensitivity	0.128ng/mL
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.
Molecular Weight	57,343 Da
OMIM	D00003 mRNA
3D Structure	ModBase 3D Structure for P08684
Intra Assay	CV<10%
Inter Assay	CV<12%
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for CYP3A4 elisa kit	MBS451019 is a ready-to-use microwell, strip-or-full 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 MBS451019 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(%).
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.

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:1.14.13.157); Albendazole monooxygenase (EC:1.14.13.32); Albendazole sulfoxidase; CYPIIIA3; CYPIIIA4; Cholesterol 25-hydroxylase
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.** In the title.
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