

Rat cytochrome P450, family 2, subfamily E, polypeptide 1 ELISA Kit | CYP2E1 elisa kit

Rat cytochrome P450 2E1, CYP2E1 ELISA Kit

CATALOG #
AAA80003

REACTIVITY
Rat

PRODUCT SYNONYMS

cytochrome P450; family 2; subfamily E; polypeptide 1; Rat cytochrome P450 2E1; CYP2E1 ELISA Kit; CPE1; CYP2E; P450-J; P450C2E; cytochrome P450 2E1; subfamily IIE (ethanol-inducible); flavoprotein-linked monooxygenase; microsomal monooxygenase; xenobiotic monooxygenas; CYP2E1 elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Rat
Specificity	This assay has high sensitivity and excellent specificity for detection of Rat CYP2E1. No significant cross-reactivity or interference between Rat CYP2E1 and analogues was observed.
Sequence Length	493
Samples	Serum, plasma, tissue homogenates
Detection Range	0.156 ng/ml-10 ng/ml
Sensitivity	0.039 ng/ml
Intra-assay Precision	Intra-assay Precision (Precision within an assay): CV% is less than 8% Three samples of known concentration were tested twenty times on one plate to assess. Inter-assay Precision (Precision between assays): CV% is less than 10% Three samples of known concentration were tested in twenty assays to assess.
Detection Wavelength	450 nm
Sample Volume	50-100ul
Preparation and Storage	Unopened test kits should be stored at 2 to 8 degree C upon receipt. Please refer to pdf manual for further storage instructions.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for CYP2E1 elisa kit

Introduction: We are constantly exposed to many potentially toxic chemicals. Most require metabolic activation to species responsible for cell injury. Although cytochrome P450 2E1 is only one of many different forms of cytochrome P450 that catalyze these reactions, it has an important role in human health as a result of being readily induced by acute and chronic alcohol ingestion. The enzyme efficiently catalyzes the low Km metabolism of compounds commonly used as solvents in industry and at home as well as components found in cigarette smoke, many of which are established carcinogens and hepatotoxins. As a result, there is the potential for increased risk to low level exposure to such chemicals while cytochrome P450 2E1 is induced. Many substrates have been identified for cytochrome P450 2E1. Of the 52 substrates for the enzyme identified in this review, the demethylation of N,N-dimethylnitrosamine and the hydroxylation of p-nitrophenol and chlorzoxazone are the most effective for monitoring the level of this enzyme. In addition to oxidative reactions, cytochrome P450 2E1 is also an efficient catalyst of reductive reactions. CCl₄-induced hepatotoxicity is one of the best- documented cases for the participation of cytochrome P450 2E1 in a toxicologically important reductive reaction. The reduction of oxygen to superoxide and peroxide are also important reductive reactions of the enzyme and could be important in lipid peroxidation. However, the role of this reaction in vivo remains controversial.

Principle of the Assay: The microtiter plate provided in this kit has been pre-coated with an antibody specific to CYP2E1. Standards or samples are then added to the 3 appropriate microtiter plate wells with a biotin-conjugated polyclonal antibody preparation specific for CYP2E1. and Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. Then a TMB (3,3',5,5' tetramethyl-benzidine) substrate solution is added to each well. Only those wells that contain CYP2E1, biotin-conjugated antibody and enzyme-conjugated Avidin will exhibit a change in color. The enzyme-substrate reaction is terminated by the addition of a sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450 nm +/- 2 nm. The concentration of CYP2E1. in the samples is then determined by comparing the O.D. of the samples to the standard curve.

NCBI AND UNIPROT INFORMATION

NCBI GI #	291404953
NCBI GeneID	100342572
NCBI Accession #	XP_002718818.1
NCBI GenBank Nucleotide #	XM_002718772.2
UniProt Accession #	P08682
Molecular Weight	56,945 Da
NCBI Official Full Name	cytochrome P450 2E1
NCBI Official Symbol	LOC100342572
NCBI Official Synonym Symbols	CYP2E; CYP2E1; CYP1IIE1
NCBI Protein Information	cytochrome P450 2E1; Cytochrome P450-ALC; Cytochrome P450 LM3A; Cytochrome P450 isozyme 3A; 4-nitrophenol 2-hydroxylase
UniProt Protein Name	Cytochrome P450 2E1
UniProt Gene Name	CYP2E1
UniProt Synonym Gene Names	CYP2E; Cytochrome P450 LM3A
UniProt Entry Name	CP2E1_RABIT

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/cyp2e1-rat-elisa-kits/cytochrome-p450-family-2-subfamily-e-polypeptide-1/80003>