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Anti-Cytochrome P450 2E1/CYP2E1 Antibody Picoband™ (monoclonal, 2C7G1)

Catalog # ABO16263

Product Information

Application	WB
Primary Accession	P05181
Host	Mouse
Isotype	Mouse IgG2b
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-Cytochrome P450 2E1/CYP2E1 Antibody Picoband™ (monoclonal, 2C7G1) . Tested in WB applications. This antibody reacts with Human, Mouse, Rat.
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500 □g/ml.

Additional Information

Gene ID	1571
Other Names	Cytochrome P450 2E1, 1.14.14.1, 4-nitrophenol 2-hydroxylase, 1.14.13.n7, CYPIIE1, Cytochrome P450-J, CYP2E1 {ECO:0000303|PubMed:10553002, ECO:0000312|HGNC:HGNC:2631}
Calculated MW	56849
Application Details	Western blot, 0.25-0.5 □g/ml, Human, Mouse, Rat
Source	Eukaryota
Contents	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
Clone Names	Clone: 2C7G1
Immunogen	E.coli-derived human Cytochrome P450 2E1/CYP2E1 recombinant protein (Position: H355-S493).
Purification	Immunogen affinity purified.
Storage	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.

Protein Information

Name	CYP2E1 {ECO:0000303|PubMed:10553002, ECO:0000312|HGNC:HGNC:2631}
Function	A cytochrome P450 monooxygenase involved in the metabolism of fatty acids (PubMed:10553002, PubMed:18577768). Mechanistically, uses molecular oxygen inserting one oxygen atom into a substrate, and reducing the second into a water molecule, with two electrons provided by NADPH via cytochrome P450 reductase (NADPH--hemoprotein reductase) (PubMed:10553002, PubMed:18577768). Catalyzes the hydroxylation of carbon-hydrogen bonds. Hydroxylates fatty acids specifically at the omega-1 position displaying the highest catalytic activity for saturated fatty acids (PubMed:10553002, PubMed:18577768). May be involved in the oxidative metabolism of xenobiotics (Probable).
Cellular Location	Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:P05182}; Peripheral membrane protein {ECO:0000250|UniProtKB:P05182}. Microsome membrane {ECO:0000250|UniProtKB:P05182}; Peripheral membrane protein {ECO:0000250|UniProtKB:P05182}. Mitochondrion inner membrane {ECO:0000250|UniProtKB:P05182}; Peripheral membrane protein {ECO:0000250|UniProtKB:P05182}. Note=Post-translationally targeted to mitochondria. TOMM70 is required for the translocation across the mitochondrial outer membrane. After translocation into the matrix, associates with the inner membrane as a membrane extrinsic protein {ECO:0000250|UniProtKB:P05182}

Background

Cytochrome P450 2E1 (abbreviated CYP2E1), a member of the cytochrome P450 mixed-function oxidase system, is involved in the metabolism of xenobiotics in the body. In humans, the CYP2E1 enzyme is encoded by the CYP2E1 gene. It is mapped to 10q26.3. While it is involved in the oxidative metabolism of a small range of substrates (mostly small polar molecules), there are many important drug interactions mediated by CYP2E1. Most drugs undergo deactivation by CYP2E1, either directly or by facilitated excretion from the body. Also, many substances are bioactivated by CYP2E1 to form their active compounds. In addition, CYP2E1 is an important enzyme for the conversion of ethanol to acetaldehyde and to acetate in humans. In the conversion sequence of acetyl-CoA to glucose, CYP2E1 transforms acetone via acetol into propylene glycol and methylglyoxal, the precursors of pyruvate, acetate and lactate.

Images

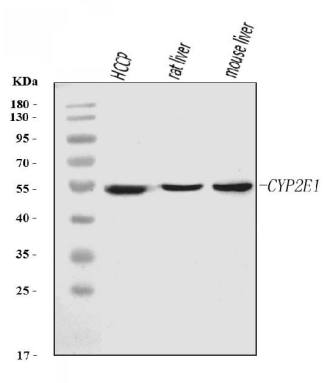


Figure 1. Western blot analysis of Cytochrome P450 2E1/CYP2E1 using anti-Cytochrome P450 2E1/CYP2E1 antibody (M00672-2).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.
The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human HCCP tissue lysates,
Lane 2: rat liver tissue lysates,
Lane 3: mouse liver tissue lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-Cytochrome P450 2E1/CYP2E1 antigen affinity purified monoclonal antibody (Catalog # M00672-2) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a

dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for Cytochrome P450 2E1/CYP2E1 at approximately 56 kDa. The expected band size for Cytochrome P450 2E1/CYP2E1 is at 56 kDa.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.