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Anti-Cytochrome P450 1A2 CYP1A2 Monoclonal Antibody

Catalog # ABO14705

Product Information

Application	WB, IF, ICC, FC
Primary Accession	P05177
Host	Rabbit
Isotype	Rabbit IgG
Reactivity	Human
Clonality	Monoclonal
Format	Liquid
Description	Anti-Cytochrome P450 1A2 CYP1A2 Monoclonal Antibody . Tested in WB, ICC/IF, Flow Cytometry applications. This antibody reacts with Human.

Additional Information

Gene ID	1544
Other Names	Cytochrome P450 1A2, 1.14.14.1, CYPIA2, Cholesterol 25-hydroxylase, Cytochrome P(3)450, Cytochrome P450 4, Cytochrome P450-P3, Hydroperoxy icosatetraenoate dehydratase, 4.2.1.152, CYP1A2 {ECO:0000303|PubMed:2575218, ECO:0000312|HGNC:HGNC:2596}
Calculated MW	58407
Application Details	WB 1:500-1:2000 ICC/IF 1:50-1:200 FC 1:500
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: AFAI-3
Immunogen	A synthesized peptide derived from human Cytochrome P450 1A2
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

Protein Information

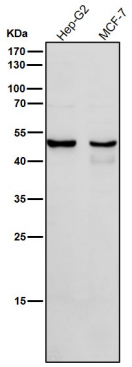
Name	CYP1A2 {ECO:0000303|PubMed:2575218, ECO:0000312|HGNC:HGNC:2596}
Function	A cytochrome P450 monooxygenase involved in the metabolism of various

endogenous substrates, including fatty acids, steroid hormones and vitamins (PubMed:10681376, PubMed:11555828, PubMed:12865317, PubMed:19965576, PubMed:9435160). 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:10681376, PubMed:11555828, PubMed:12865317, PubMed:19965576, PubMed:9435160). Catalyzes the hydroxylation of carbon-hydrogen bonds (PubMed:11555828, PubMed:12865317). Exhibits high catalytic activity for the formation of hydroxyestrogens from estrone (E1) and 17beta- estradiol (E2), namely 2-hydroxy E1 and E2 (PubMed:11555828, PubMed:12865317). Metabolizes cholesterol toward 25-hydroxycholesterol, a physiological regulator of cellular cholesterol homeostasis (PubMed:21576599). May act as a major enzyme for all-trans retinoic acid biosynthesis in the liver. Catalyzes two successive oxidative transformation of all-trans retinol to all-trans retinal and then to the active form all-trans retinoic acid (PubMed:10681376). Primarily catalyzes stereoselective epoxidation of the last double bond of polyunsaturated fatty acids (PUFA), displaying a strong preference for the (R,S) stereoisomer (PubMed:19965576). Catalyzes bisallylic hydroxylation and omega-1 hydroxylation of PUFA (PubMed:9435160). May also participate in eicosanoids metabolism by converting hydroperoxide species into oxo metabolites (lipoxygenase-like reaction, NADPH- independent) (PubMed:21068195). Plays a role in the oxidative metabolism of xenobiotics. Catalyzes the N-hydroxylation of heterocyclic amines and the O-deethylation of phenacetin (PubMed:14725854). Metabolizes caffeine via N3-demethylation (Probable).

Cellular Location Endoplasmic reticulum membrane; Peripheral membrane protein. Microsome membrane; Peripheral membrane protein

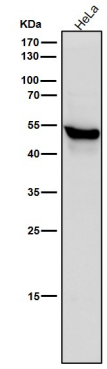
Tissue Location Liver.

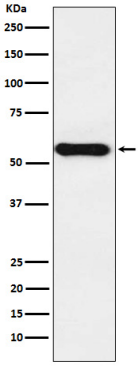
Images



All lanes use the Antibody at 1:1K dilution for 1 hour at room temperature.

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Western blot analysis of Cytochrome P450 1A2 expression in Caco2 cell lysate.

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