

**Product Name: Cytochrome P450 1A2 (8B7) Rabbit
Monoclonal Antibody
Catalog #: AMRe09712**



Summary

Production Name	Cytochrome P450 1A2 (8B7) Rabbit Monoclonal Antibody
Description	Rabbit Monoclonal Antibody
Host	Rabbit
Application	WB
Reactivity	Human

Performance

Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Monoclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% New type preservative N and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.
Purification	Affinity purification

Immunogen

Gene Name	CYP1A2 {ECO:0000303 PubMed:2575218, ECO:0000312 HGNC:HGNC:2596}
Alternative Names	CP12; CYP1A2; CYP1A2; P3 450; P450 4; P450 P3;
Gene ID	1544.0
SwissProt ID	P05177.

Application

Dilution Ratio	WB 1:500-1:2000
Molecular Weight	58kDa

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Background

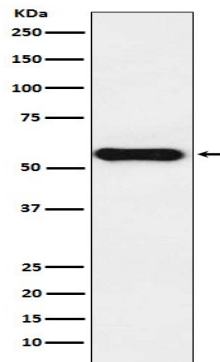
Cytochromes P450 are a group of heme-thiolate monooxygenases. In liver microsomes, this enzyme is involved in an NADPH-dependent electron transport pathway. A cytochrome P450 monooxygenase involved in the metabolism of various endogenous substrates, including fatty acids, steroid hormones and vitamins (PubMed: [9435160](http://www.uniprot.org/citations/9435160), PubMed: [10681376](http://www.uniprot.org/citations/10681376), PubMed: [11555828](http://www.uniprot.org/citations/11555828), PubMed: [12865317](http://www.uniprot.org/citations/12865317), PubMed: [19965576](http://www.uniprot.org/citations/19965576)). 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: [9435160](http://www.uniprot.org/citations/9435160), PubMed: [10681376](http://www.uniprot.org/citations/10681376), PubMed: [11555828](http://www.uniprot.org/citations/11555828), PubMed: [12865317](http://www.uniprot.org/citations/12865317), PubMed: [19965576](http://www.uniprot.org/citations/19965576)). Catalyzes the hydroxylation of carbon-hydrogen bonds (PubMed: [11555828](http://www.uniprot.org/citations/11555828), PubMed: [12865317](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/11555828), PubMed: [12865317](http://www.uniprot.org/citations/12865317)). Metabolizes cholesterol toward 25-hydroxycholesterol, a physiological regulator of cellular cholesterol homeostasis (PubMed: [21576599](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/19965576)). Catalyzes bisallylic hydroxylation and omega-1 hydroxylation of PUFA (PubMed: [9435160](http://www.uniprot.org/citations/9435160)). May also participate in eicosanoids metabolism by converting hydroperoxide species into oxo metabolites (lipoxygenase-like reaction, NADPH- independent) (PubMed: [21068195](http://www.uniprot.org/citations/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](http://www.uniprot.org/citations/14725854)). Metabolizes caffeine via N3-demethylation (Probable).

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Research Area

Image Data



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

Note

For research use only.