

产品名称: Cytochrome P450 3A4 (12D7) Rabbit Monoclonal Antibody
产品货号: AMRe09714



产品概述 (Summary)

产品名称 (Production Name)	Cytochrome P450 3A4 (12D7) Rabbit Monoclonal Antibody
描述 (Description)	Recombinant rabbit monoclonal antibody
宿主 (Host)	Rabbit
应用 (Application)	WB,IHC,IP,IF-P
种属反应性 (Reactivity)	Human

产品性能 (Performance)

偶联物 (Conjugation)	Unconjugated
修饰 (Modification)	Unmodified
同种型 (Isotype)	IgG
克隆 (Clonality)	Monoclonal
形式 (Form)	Liquid
存放说明 (Storage)	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
储存溶液 (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.
纯化方式 (Purification)	Affinity purification

免疫原信息 (Immunogen)

基因名 (Gene Name)	CYP3A4
别名 (Alternative Names)	CYP3A4; CYP11A3; CYP11A4; Cytochrome P450 3A3; Cytochrome P450 HLp; Cytochrome P450 NF-25; Cytochrome P450-PCN1; Nifedipine oxidase;
基因 ID (Gene ID)	1576.0
蛋白 ID (SwissProt ID)	P08684.

产品应用 (Application)

稀释比 (Dilution Ratio)	WB 1:500-1:2000,IHC 1:100-1:200,IP 1:10-1:100,IF-P 1:100-1:200
蛋白分子量 (Molecular Weight)	57kDa

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研究背景 (Background)

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 sulfoxidation, midazolam 1'-hydroxylation and midazolam 4-hydroxylation) of structurally unrelated compounds, including steroids, fatty acids, and xenobiotics. The enzyme also hydroxylates etoposide. A cytochrome P450 monooxygenase involved in the metabolism of sterols, steroid hormones, retinoids and fatty acids (PubMed: [10681376](http://www.uniprot.org/citations/10681376), PubMed: [11093772](http://www.uniprot.org/citations/11093772), PubMed: [11555828](http://www.uniprot.org/citations/11555828), PubMed: [14559847](http://www.uniprot.org/citations/14559847), PubMed: [12865317](http://www.uniprot.org/citations/12865317), PubMed: [15373842](http://www.uniprot.org/citations/15373842), PubMed: [15764715](http://www.uniprot.org/citations/15764715), PubMed: [20702771](http://www.uniprot.org/citations/20702771), PubMed: [19965576](http://www.uniprot.org/citations/19965576), PubMed: [21490593](http://www.uniprot.org/citations/21490593), PubMed: [21576599](http://www.uniprot.org/citations/21576599)). 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). Catalyzes the hydroxylation of carbon-hydrogen bonds (PubMed: [2732228](http://www.uniprot.org/citations/2732228), PubMed: [14559847](http://www.uniprot.org/citations/14559847), PubMed: [12865317](http://www.uniprot.org/citations/12865317), PubMed: [15373842](http://www.uniprot.org/citations/15373842), PubMed: [15764715](http://www.uniprot.org/citations/15764715), PubMed: [21576599](http://www.uniprot.org/citations/21576599), PubMed: [21490593](http://www.uniprot.org/citations/21490593)). Exhibits high catalytic activity for the formation of hydroxysteroids from estrone (E1) and 17 β -estradiol (E2), namely 2-hydroxy E1 and E2, as well as D-ring hydroxylated E1 and E2 at the C-16 position (PubMed: [11555828](http://www.uniprot.org/citations/11555828), PubMed: [14559847](http://www.uniprot.org/citations/14559847), PubMed: [12865317](http://www.uniprot.org/citations/12865317)). Plays a role in the metabolism of androgens, particularly in oxidative deactivation of testosterone (PubMed: [2732228](http://www.uniprot.org/citations/2732228), PubMed: [15373842](http://www.uniprot.org/citations/15373842), PubMed: [15764715](http://www.uniprot.org/citations/15764715)).

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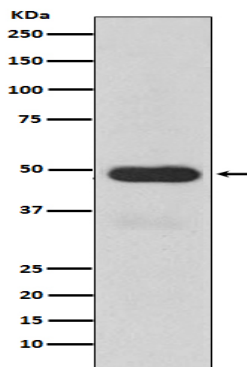
href="http://www.uniprot.org/citations/22773874" target="_blank">22773874). Metabolizes testosterone to less biologically active 2beta- and 6beta- hydroxytestosterones (PubMed:2732228, PubMed:15373842, PubMed:15764715). Contributes to the formation of hydroxycholesterols (oxysterols), particularly A-ring hydroxylated cholesterol at the C- 4beta position, and side chain hydroxylated cholesterol at the C-25 position, likely contributing to cholesterol degradation and bile acid biosynthesis (PubMed:21576599). Catalyzes bisallylic hydroxylation of polyunsaturated fatty acids (PUFA) (PubMed:9435160). Catalyzes the epoxidation of double bonds of PUFA with a preference for the last double bond (PubMed:19965576). Metabolizes endocannabinoid arachidonylethanolamide (anandamide) to 8,9-, 11,12-, and 14,15- epoxyeicosatrienoic acid ethanolamides (EpETE-EAs), potentially modulating endocannabinoid system signaling (PubMed:20702771). Plays a role in the metabolism of retinoids. Displays high catalytic activity for oxidation of all-trans-retinol to all-trans-retinal, a rate- limiting step for the biosynthesis of all-trans-retinoic acid (atRA) (PubMed:10681376). Further metabolizes atRA toward 4-hydroxyretinoate and may play a role in hepatic atRA clearance (PubMed:11093772). Responsible for oxidative metabolism of xenobiotics. Acts as a 2-exo- monooxygenase for plant lipid 1,8-cineole (eucalyptol) (PubMed:11159812). Metabolizes the majority of the administered drugs. Catalyzes sulfoxidation of the anthelmintics albendazole and fenbendazole (PubMed:10759686). Hydroxylates antimalarial drug quinine (PubMed:8968357). Acts as a 1,4-cineole 2-exo-monooxygenase (PubMed:11695850). Also involved in vitamin D catabolism and calcium homeostasis. Catalyzes the inactivation of the active hormone calcitriol (1-alpha,25-dihydroxyvitamin D(3)) (PubMed:29461981).

研究领域 (Research Area)

Steroid hormone biosynthesis;Linoleic acid metabolism;Retinol metabolism;Metabolism of xenobiotics by cytochrome P450;Drug metabolism;Drug metabolism;

图片 (Image Data)

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Western blot analysis of Cytochrome P450 3A4 expression in Human fetal liver lysate.

注意事项 (Note)

For research use only .