

Cytochrome P450 3A4 monoclonal antibody

Catalog: MB66848

Host: Mouse

Reactivity: Human

Background:

A cytochrome P450 monooxygenase involved in the metabolism of sterols, steroid hormones, retinoids and fatty acids. 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. Exhibits high catalytic activity for the formation of hydroxyestrogens from estrone 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. Plays a role in the metabolism of androgens, particularly in oxidative deactivation of testosterone. Metabolizes testosterone to less biologically active 2 β - and 6 β -hydroxytestosterones. Contributes to the formation of hydroxycholesterols (oxysterols), particularly A-ring hydroxylated cholesterol at the C-4 β position, and side chain hydroxylated cholesterol at the C-25 position, likely contributing to cholesterol degradation and bile acid biosynthesis. Catalyzes bisallylic hydroxylation of polyunsaturated fatty acids (PUFA). Catalyzes the epoxidation of double bonds of PUFA with a preference for the last double bond. Metabolizes endocannabinoid arachidonylethanolamide (anandamide) to 8,9-, 11,12-, and 14,15-epoxyeicosatrienoic acid ethanolamides (EpETrE-EAs), potentially modulating endocannabinoid system signaling. 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). Further metabolizes atRA toward 4-hydroxyretinoate and may play a role in hepatic atRA clearance. Responsible for oxidative metabolism of xenobiotics. Acts as a 2-exo-monooxygenase for plant lipid 1,8-cineole. Metabolizes the majority of the administered

drugs. Catalyzes sulfoxidation of the anthelmintics al-bendazole and fenbendazole. Hydroxylates antimalarial drug quinine. Acts as a 1,4-cineole 2-exo-monooxygenase. Also involved in vitamin D catabolism and calcium homeostasis. Catalyzes the inactivation of the active hormone calcitriol.

Product:

Mouse IgM. Liquid in PBS, pH 7.3, 30% glycerol, and 0.01% sodium azide.

Molecular Weight:

~ 50 kDa

Swiss-Prot:

P08684

Purification&Purity:

This antibody is purified through a protein G column.

Applications:

WB (1/500 - 1/1000)

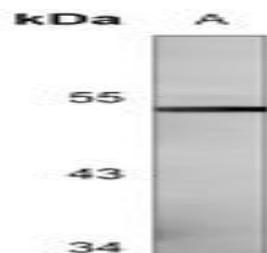
Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

Specificity:

Recognizes endogenous levels of Cytochrome P450 3A4 protein.

DATA:



Western blot analysis of Cytochrome P450 3A4 expression in T47D (A) whole cell lysates.

Note:

For research use only, not for use in diagnostic procedure.

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